APPLIED DNA SCIENCES INC
Form 10-K
December 16, 2008

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended September 30, 2008

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 002-90539

APPLIED DNA SCIENCES, INC.
(Name of small business issuer in its charter)

Nevada		59-2262718
(State or other jurisdiction of incorporation or organization)		(I.R.S. Employer Identification Number)
25 Health Sciences Drive, Suite 113 Stony Brook, New York	11790	(631) 444-6862
(Address of principal executive office)	(Postal Code)	(Issuer's telephone number)

Securities registered under Section 12(b) of the Exchange Act: None

Securities registered under Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained

herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o Accelerated filer o Non-accelerated filer o Smaller reporting company x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x

The aggregate market value of the Registrant's common stock held by non-affiliates of the Registrant, based upon the last sale price of the Common Stock quoted on the OTC Bulletin Board as of the last business day of the Registrant's most recently completed second fiscal quarter (March 31, 2008), was approximately $21,056,590. Shares of the Registrant's common stock held by each executive officer and director and by each entity or person that, to the Registrant's knowledge, owned 5% or more of the Registrant's outstanding common stock as of March 31, 2008 have been excluded in that such persons may be deemed to be affiliates of the Registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of December 15, 2008, the Registrant had outstanding 231,870,731 shares of Common Stock, par value $0.001 per share.

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PART I

Forward-looking Information

This Annual Report on Form 10-K (including the section regarding Management's Discussion and Analysis of Financial Condition and Results of Operations) contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including statements using terminology such as "can", "may", "believe", "designate to", "will", "expect", "plan", "anticipate", "estimate", "potential" or "continue", or the negative thereof or other com terminology regarding beliefs, plans, expectations or intentions regarding the future. You should read statements that contain these words carefully because they:

- discuss our future expectations;
- contain projections of our future results of operations or of our financial condition; and
- state other "forward-looking" information.

We believe it is important to communicate our expectations. However, forward looking statements involve risks and uncertainties and our actual results and the timing of certain events could differ materially from those discussed in forward-looking statements as a result of certain factors, including those set forth under "Risk Factors," "Business" and elsewhere in this report. All forward-looking statements and risk factors included in this document are made as of the date hereof, based on information available to us as of the date thereof, and we assume no obligations to update any forward-looking statement or risk factor, unless we are required to do so by law.

ITEM 1. BUSINESS.

Overview

We use the DNA of plants and innovative technologies to provide anti-counterfeiting and product authentication solutions and to manufacture ingredients for personal care products and textiles. SigNature® DNA and BioMaterial™ Genotyping, our principal anti-counterfeiting and product authentication solutions, allow users to accurately and effectively protect branded products, artwork and collectibles, fine wine, digital media, financial instruments, identity cards and other official documents. Our BioActive™ Ingredients, which are being used by our customers in personal care products, such as skin care products, and in textiles, such as intimate apparel, are custom-manufactured to address a customer's specific need.

SigNature DNA. We use the DNA of plants to manufacture highly customized and encrypted botanical DNA markers, or SigNature DNA Markers, which we believe are virtually impossible to replicate. We have embedded SigNature DNA Markers into a range of our customers' products, including various inks, thermal ribbon, thread, varnishes and adhesives. These items can then be tested for the presence of SigNature DNA Markers through an instant field detection or a forensic level authentication. Our SigNature DNA solution provides a secure, accurate and cost-effective means for users to incorporate our SigNature DNA Markers in, and then quickly and reliably authenticate and identify, a broad range of items such as branded products, artwork and collectibles, cash-in-transit, fine wine, digital media, financial instruments, identity cards and other official documents. Having the ability to reliably authenticate and identify counterfeit versions of such items enables companies and governments to detect, deter, interdict and prosecute counterfeiting enterprises and individuals.

BioMaterial GenoTyping. Our BioMaterial GenoTyping solution refers to the development of genetic assays to distinguish between varieties or strains of biomaterials, such as cotton, wool, tobacco, fermented beverages, natural drugs and foods, that contain their own source DNA. We have developed two proprietary genetic tests (FiberTyping™ and PimaTyping™) to track American Pima cotton from the field to finished garments. These genetic assays provide the

cotton industry with the first authentication tools that can be applied throughout the U.S. and worldwide cotton industry from cotton growers, mills, wholesalers, distributors, manufacturers and retailers through trade groups and government agencies.

BioActive Ingredients. Our BioActive Ingredients program began in 2007, based on the biofermentation expertise developed during the manufacturing of DNA for our SigNature DNA and BioMaterial Genotyping solutions. Our BioActive Ingredients have been used by our customers in personal care products, such as skin care products, and in textiles, such as intimate apparel.

Corporate History

We are a Nevada corporation, which was initially formed under the laws of the State of Florida as Datalink Systems, Inc. in 1983. In 1998, we reincorporated in Nevada, and in November of 2002, we changed our name to our current name, Applied DNA Sciences, Inc. A proposal has been submitted to the stockholders for consideration at the 2008 Annual Meeting of Stockholders to be held on December 16, 2008 to change the state of incorporation from Nevada to Delaware. In November 2005, our corporate headquarters were relocated from Los Angeles, California to the Long Island High Technology Incubator at Stony Brook University in Stony Brook, New York, where we established laboratories for the manufacture of DNA markers and product prototypes, and DNA authentication. To date, the company has a very limited operating history, and as a result, the company's operations have produced insignificant revenues.

Industry Background

Counterfeiting, product diversion, piracy, forgery, identity theft, and unauthorized intrusion into physical locations and databases create significant and growing problems to companies in a wide range of industries as well as governments and individuals worldwide. The U.S. Chamber of Commerce reported in 2007 that counterfeiting and piracy cost the U.S. economy between $200-$250 billion per year, or an estimated 750,000 American jobs, and pose a real threat to consumer health and safety. The World Customs Organization and Interpol estimate that annual global trade in illegitimate goods was $650 billion in 2007.

Product counterfeiting and diversion particularly harms manufacturers of consumer products, especially for prestige and established brands, and the consumers who purchase them. This total includes:

$34 billion of software products;
$12 billion of apparel and footwear;
$193 million of cigarettes and tobacco products;
$32 billion of pharmaceuticals;
$18 million in wine;
$500 million of sports equipment;
$35 million of electronic equipment and supplies;
$3 billion in cosmetics;
$12 billion in automobile parts;
$11 million of food and alcohol products;
$11 million in jewelry and watches;
$10 million of computer equipment and supplies; and
$123 million of other goods.

The artworks and collectibles markets are also particularly vulnerable to counterfeiting, forgery and fraud. New works are produced and then passed off as originating from a particular artistic period or source, authentic fragments are pieced together to simulate an original work, and existing works are modified in order to increase their purported value. Such phony artwork and collectibles are then often sold with fake or questionable signatures and "provenance," or documented ownership histories that confirm authenticity.

Cash-in-transit businesses transport and store cash and ATM cassettes. In the U.K. alone, there is an estimated £500 billion being transported each year, or £1.4 billion per day. The nature of this business makes cash-in-transit an attractive target for criminals, and as a result the industry invests in excess of £100 million per year in security equipment and devices. Currently, a system of cash degradation, using a smoke or liquid dye to permanently mark and essentially destroy stolen cash, is used. The incidence of cash-in-transit based crime has increased over 170% in London since 2006, according to the Metropolitan Police.

Governments are increasingly vulnerable to counterfeiting, terrorism and other security threats at least in part because currencies, identity and security cards and other official documents can be counterfeited with relative ease. For instance, the DOPIP valued 2005 seizures and losses associated with counterfeit currency at around $609 billion, and counterfeit identification at $124 million. Governments must also enforce the various anti-counterfeiting and anti-piracy regimes of their respective jurisdictions which becomes increasingly difficult with the continued expansion of global trade.

The digital and recording media industry, including the segment that records computer software on compact discs, has long been a victim of piracy, or the production of illegal copies of genuine media or software, and the counterfeiting and distribution of imitation media or software. Compact discs, DVDs, videotapes, computer software and other digital and recording media that appears identical to genuine products are sold at substantial discounts by vendors at street and night markets, via mail order catalogs and on the internet at direct retail websites or at auction sites. In 2008 the Business Software Alliance ("BSA") reported that in 2007, the United States lost $8.0 billion as a result of software piracy. The BSA also estimated that 33 percent of software programs in the U.S. are unlicensed and that since January 1, 2000, the BSA has settled with 1,668 companies for a total of $81,821,895. In a white paper published in December 2005, the BSA and the IDC also reported that they found in a 2007 study that for every two dollars worth of software purchased legitimately, one dollar was obtained illegally.

The pharmaceutical industry also faces major problems relative to counterfeit, diluted, or falsely labeled drugs that make their way through healthcare systems worldwide, posing a health threat to patients and a financial threat to drugmakers and distributors. In 2006 the Center for Medicine in the Public Interest predicted that counterfeit drug sales will reach $75 billion globally in 2010, an increase of more than 90% from 2005. In February 2006, the World Health Organization ("WHO") estimated that counterfeits account for more than 10% of the global pharmaceuticals market, and 25% of pharmaceuticals consumed in developing countries and that as much as 50% in some countries, are counterfeit. According to the WHO, counterfeiting can apply to both branded and generic products and counterfeit pharmaceuticals may include products with the correct ingredients but fake packaging, with the wrong ingredients, without active ingredients or with insufficient active ingredients. The challenges presented by traditional counterfeiters have recently been supplemented by the many websites, from direct retailers to auction sites, that offer counterfeit prescription drugs online. As a result, the pharmaceutical industry and regulators are examining emerging anti-counterfeit technologies, including radio-frequency identification tags and electronic product codes, known as EPCs, to help stem the wave of counterfeit drugs and better track legitimate drugs from manufacturing through the supply chain.

As more and more companies in each of these markets begin to address the problem of counterfeiting, we expect that different systems will compete to be the leading standards by which products can be tracked across world markets. Historically, counterfeiting, product diversion and other types of fraud have been combatted by embedding various authentication systems and rare and easily distinguishable materials into products, such as radio frequency identification (RFID) devices and banknote threads in packaging, integrated circuit chips and magnetic strips in automatic teller machine cards, holograms on currency, elemental taggants in explosives, and radioactivity and rare molecules in crude oil. These techniques are effective but have generally been reverse-engineered and replicated by counterfeiters, which limits their usefulness as forensic methods for authentication of the sources of products and other items.

Every living organism has a unique DNA code that determines the character and composition of its cells. The core technologies of our business allow us to use the DNA of everyday plants to mark objects in a unique manner that we believe cannot be replicated, and then identify these objects by detecting the absence or presence of the DNA. Our scientific team was able to develop genetic based assays and protocols to identify DNA markers that are endogenous to a particular plant in order to differentiate between biological strains of cotton and we are now employing the same methodology in wool, wine and other natural products. In addition, in the case of Pima cotton, we have developed proprietary technologies to differentiate between Pima (G. barbadense) and Non-Pima (G. hirsutum) cotton with absolute certainty. In the process, we were also able to develop an approach to attach an exogenous DNA marker to a finished textile product. Cotton classification and the authentication of cotton geographic origin are issues of global significance, important to brand owners and to governments that must regulate the international cotton trade. The use of DNA to identify the cotton fiber content of finished textiles is a significant opportunity for license holders to control their brand and for governments to improve their ability to enforce compliance with trade agreements between nations. In addition to the global cotton trade, the markets for BioMaterial Genotyping include biotherapeutics, nutraceuticals, natural foods, wines and fermented alcohols and other natural textiles.

The global market for specialty raw materials for cosmetics and toiletries, which includes BioActive Ingredients, was reported to be $5.9 billion in 2006 with an estimated growth of 5% per year (Freedonia).

Our Offerings

SigNature DNA

We believe our SigNature DNA offering is as broadly applicable, convenient and inexpensive as existing authentication systems, while highly resistant to reverse-engineering or replication, so that it can either be applied independently or supplement existing systems in order to allow for a forensic level of authentication of the sources of

a broad range of items, such as artwork and collectibles, fine wine, consumer products, digital and recording media, pharmaceuticals, financial instruments, identity cards and official documents. Each SigNature DNA Marker is first designed and manufactured to be a highly customized and encrypted botanical DNA marker. The SigNature DNA Marker is then encapsulated and stabilized so that it is resistant to heat, organic solvents, chemicals and most importantly, ultraviolet, or UV radiation. Once it has been encapsulated, our SigNature DNA Embedment system can be used to embed the SigNature DNA Marker directly onto products or other items or into special inks, threads and other media, which in turn can be incorporated into packaging or products. Once it is embedded, our SigNature DNA Encryption Detector pen can instantly test for the presence or absence of any of our SigNature DNA Markers, and our SigNature polymerase chain reaction (PCR) Kits can provide rapid forensic level authentication of specific SigNature DNA Markers.

We believe that the key characteristics and benefits of the SigNature DNA offering are as follows:

We Believe Our SigNature DNA Markers Are Virtually Impossible to Copy

In creating unique SigNature DNA Markers, we use DNA segments from one or more botanical sources, rearrange them into unique encrypted sequences, and then implement one or more layers of anti-counterfeit techniques. Because the portion of DNA in a SigNature DNA Marker used to identify the marker is so minute, it cannot be detected unless it is replicated billions of times over, or amplified. This amplification can only be achieved by applying matching strands of DNA, or a primer, and polymerase chain reaction (PCR) techniques to the SigNature DNA Marker. The sequence of the relevant DNA in a SigNature DNA Marker must be known in order to manufacture the primer for that DNA. As a result, we believe the effort required to find, amplify, select and clone the relevant DNA in a SigNature DNA Marker would involve such enormous effort and expense that SigNature DNA Markers are virtually impossible to copy without our proprietary systems.

Simple and Rapid Authentication

We offer rapid readers capable of instantly testing for the presence or absence of any of our SigNature DNA Markers. In addition, when a forensic level of authentication is necessary, we offer in-field or in-house forensic DNA authentication with a handheld battery powered PCR-based device that will confirm authentication sequences in approximately 10 minutes.

Low Cost and High Accuracy

The costs associated with the DNA required to manufacture our SigNature DNA Markers are not significant since the amount of DNA required for each marker is so minute (for instance, only 3-5 parts per million when incorporated in an ink). We manufacture the identifying segment of DNA to be used in a SigNature DNA Marker by cloning them inside microorganisms such as yeast or bacteria, which are highly productive and inexpensive to grow. As a result, SigNature DNA Markers are relatively inexpensive when compared to other anti-counterfeiting devices such as RFIDs, EPCs, integrated circuit chips, and holograms. The probability of mistakenly identifying a SigNature DNA Marker is less than 1 in 1 trillion, so our authentication systems are highly accurate, and in fact, our SigNature PCR Kits can authenticate to a forensic level.

Easily Integrated with Other Anti-Counterfeit Technologies

Our SigNature DNA Markers can be embedded onto RFID devices, banknote threads, labels, serial numbers, holograms, and other marking systems using inks, threads and other media. We believe that combined with other traditional methods, our SigNature DNA solution provides a significant deterrent against counterfeiting, product diversion, piracy, fraud and identity theft.

Broad Applicability and Ingestible

Our SigNature DNA Markers can be embedded into almost any consumer product, and virtually any other item. For instance, the indelible SigNature DNA Ink we produce is safe to consume and can be used in pharmaceutical drug tablets and capsules. Use of our SigNature DNA in ingestible products and drugs will require approval of the U.S. Food and Drug Administration.

BioMaterial Genotyping

We believe our BioMaterial Genotyping solution offers a unique means for determining the authenticity of biomaterials, such as cotton, wool, tobacco, fermented beverages, natural drugs and foods. Just as a person's DNA

specifies all of their unique qualities, biomaterials typically contain genomic DNA or fragments thereof that can be utilized to authenticate originality. We have initially developed two proprietary genetic-based assays and protocols to identify DNA markers that are endogenous (internal) to a particular product in order to differentiate between biological strains. In a process we call Fibertyping™, we are able to differentiate between Pima cotton (G. barbadense) and upland cotton (G. hirsutum). Our FiberTyping offering enables our customers and potential clients to cost-effectively give assurance to manufacturers, suppliers, distributors, retailers and end-users that their products are authentic, that they are made from the fibers and textiles as labeled. In a process we call Pimatyping™, we are able to differentiate between Pima cotton grown in different regions of the world. Cotton classification and the authentication of cotton geographic origin are issues of global significance, important to brand owners and to governments that must regulate international cotton trade. Similar offerings are currently being developed for use in biomaterials other than cotton. Biomaterials can now be tracked from field to final purchase guaranteeing the authenticity of the item. As we are testing for innate genomic DNA, we believe these assays cannot be counterfeited.

We believe our BioMaterial Genotyping allows us to:

Identify U.S. produced Pima cotton;
Establish an authentication protocol for cotton and other biomaterials; and
Deter counterfeits and protect the integrity of brands.

We believe our two genetic assays accurately distinguish between:

Pima cotton (G. barbadense) and upland cotton (G. hirsutum) cultivars in mature cotton fibers and in cotton fabrics (Fibertyping); and
American Pima and Extra Long Staple (ELS) Pima cotton (Pimatyping),

We believe that our new DNA extraction protocol and methodologies are more effective than existing forensic systems. We believe that the combination of our SigNature DNA and BioMaterial Genotyping solutions covers the total authentication market, is applicable to multiple industry verticals, and can mark physical products on the front end and authenticate forensic DNA sequences on the back end.

BioActive Ingredients

Our BioActive Ingredients program began in 2007, based on the biofermentation expertise developed from our experience with the manufacture of DNA for our SigNature DNA and BioMaterial Genotyping solutions. We initially targeted potential customers in the personal care products industry, and we developed DermalRx, a range of high performance ingredients used by our customers for skin care applications. We subsequently developed DermalRx HydroSeal, which has been incorporated into the fabric of a new line of intimate apparel currently being test marketed by a global marketer of intimate apparel. In addition, we developed DermalRx SRC, Skin Resurfacing Complex, an ingredient designed to promote smoother more radiant skin by stimulating the skin's own exfoliation process.

Our Strategy

We have begun to generate revenues principally from sales of our SigNature DNA, BioMaterial Genotyping and BioActive Ingredients offerings. Key aspects of our strategy include:

Customize and Refine our Solutions to Meet Potential Customers' Needs

We are continuously attempting to improve our SigNature DNA solution by testing the incorporation of our SigNature DNA Markers into different media, such as newly configured labels, inks or packing elements, for use in new applications. Each prospective customer has specific needs and employs varying levels of existing security technologies with which our solution must be integrated. Our goal is to develop a secure and cost-effective system for each potential customer that can be incorporated into that potential customer's products or items themselves or their packaging so that they can, for instance, be tracked throughout the entire supply chain and distribution system.

Continue to Enhance Detection Technologies for Authentication of our SigNature DNA Markers

We have also identified and are further examining opportunities to collaborate with companies and universities to develop a new line of detection technologies that will provide faster and more convenient ways to authenticate our SigNature DNA Markers.

Target Potential High-Volume Markets

We will continue to focus our efforts on target vertical markets that are characterized by a high level of vulnerability to counterfeiting, product diversion, piracy, fraud, identity theft, and unauthorized intrusion into physical locations and databases. Today our target markets include art and collectibles, cash-in-transit, fine wine, consumer products, digital and recording media, pharmaceuticals, textile and apparel authentication and secure documents/homeland security. If and when we have significantly penetrated these markets, we intend to expand into additional related high volume markets.

Pursue Strategic Acquisitions and Alliances

We intend to pursue strategic acquisitions of companies and technologies that strengthen and complement our core technologies, improve our competitive positioning, allow us to penetrate new markets, and grow our customer base. We also intend to work in collaboration with potential strategic partners in order to continue to market and sell new product lines derived from, but not limited to, DNA technology.

Target Markets

We have begun offering our products and services in Europe and the United States and are targeting the following principal markets:

Art & Collectibles

The fine art and collectibles markets are particularly vulnerable to counterfeiting, forgeries and fraud. Phony artwork and collectibles are often sold with fake or questionable signatures or attributions. We believe our SigNature DNA Markers can safely be embedded directly in, and so can be used to designate and then authenticate all forms of artwork and collectibles, including paintings, books, porcelain, marble, stone, bronzes, tapestries, glass and fine woodwork, including frames. They can also be embedded in any original supporting documentation related to the artwork or collectible, the signature of the artist and any other relevant material that would provide provenance, such as:

A signed certificate or statement of authenticity from a respected authority or expert on the artist;
An exhibition or gallery sticker attached to the art or collectible;
An original sales receipt;
A film or recording of the artist talking about the art or collectible;
An appraisal from a recognized authority or expert on the art or collectible; and
Letters or papers from recognized experts or authorities discussing the art or collectible.

Cash-in-Transit

Cash-in-transit businesses transport and store bank notes and ATM cassettes. In the U.K. alone, there is an estimated £500 billion being transported each year, or £1.4 billion per day. The nature of this business makes cash-in-transit an attractive target for criminals, and as a result the industry invests in excess of £100 million per year in security equipment and devices. Currently, a system of cash degradation, using a smoke or liquid dye to permanently mark and essentially destroy stolen bank notes, is used. The incidence of cash-in-transit based crime has increased over 170% in London since 2006, according to the Metropolitan Police and the UK boasts the highest levels of cash-in-transit crime in Europe.

We are able to incorporate our SigNature DNA Markers in cash degradation ink that is used in the cash-in-transit industry. This solvent-based ink marks bank notes if the cash box is compromised and has the ability to penetrate the bank notes rapidly and permanently. We believe our SigNature DNA Markers are more resilient and detectable than other competing products.

Fine Wine

Vintners and purveyors of fine wine are also vulnerable to counterfeiting or product diversion. We believe our SigNature and BioMaterial Genotyping solutions can provide vintners, purveyors of fine wines and organizations within the wine community several benefits:

Verifed authenticity increases potential customers' confidence in the product and their purchase decision;
For the vintner, the SigNature and BioMaterial Genotyping solutions can strengthen brand support and recognition, and offers the potential for improved marketability and sales; and
SigNature DNA Markers can be embedded in bottles, labels, or both at the winery, and easily authenticated at the location of the wine distributor or auctioneer; BioMaterial Genotyping allows the identification of wine based on the varietal of grape and the region it is grown in.

Consumer Products

Counterfeit items are a significant and growing problem with all kinds of consumer packaged goods, especially in the retail and apparel industries. According to the World Customs Organization, up to $12 billion worth of clothing and accessories worldwide are fake, and Interpol reported $3 billion worth of fragrances and cosmetics are counterfeit each year. In the United States, $1.29 billion dollars worth of seizures and losses were incurred resulting from counterfeit of apparel and other consumer products. We have developed and are currently marketing a number of solutions aimed at brand protection and authentication for the retail and apparel industries, including the clothing, accessories, fragrances and cosmetics segments. Our SigNature DNA solution can be used by manufacturers in these industries to combat counterfeiting and piracy of primary, secondary and tertiary packaging, as well as the product itself, and to track products that have been lost in transit, whether misplaced or stolen.

Digital and Recording Media

The digital and recording media industry, including the segment that records computer software on compact discs, faces significant threats from piracy and the counterfeiting and distribution of imitation media or software. In 2008 the Business Software Alliance ("BSA") reported that in 2007, the United States software industry lost $8.9 billion as a result of software piracy, an increase of $1.6 billion over the previous year. An independent study conducted by IDC for the BSA reported that 33 percent of software in the United States is unlicensed. Our SigNature DNA Markers can be embedded onto digital and recording media products, such as CDs, DVDs, videotapes and computer software, as well as the packaging of these products.

Pharmaceuticals

The pharmaceutical industry also faces major problems relative to counterfeit, diluted, or falsely labeled drugs that make their way through healthcare systems worldwide, posing a health threat to patients and a financial threat to drugmakers and distributors. As a result, the pharmaceutical industry and regulators are examining emerging anti-counterfeit technologies, including RFID tags and EPCs to help stem the wave of counterfeit drugs and better track legitimate drugs from manufacturing through the supply chain. Our SigNature DNA Markers can easily be embedded directly into pharmaceutical packaging or into RFID tags or EPCs attached to packaging, and since they are ingestible, may be applied as part of a unit dose. In its 2004 report "Combating Counterfeit Drugs," the U.S. Food and Drug Administration noted that authentication technologies for pharmaceuticals (such as color-shifting inks, holograms, taggants, or chemical markers embedded in a drug or its label) have been sufficiently perfected that they can now serve as a critical component of a layered approach to control counterfeit drugs. The U.S. Food and Drug Administration’s 2004 Report acknowledged the importance of using one or more authentication technologies for drug products.

Secure Documents/Homeland Security

Governments worldwide are increasingly faced with the problems of counterfeit currencies, official documents, and identity and security cards, as well as terrorism and other security threats. Governments must also enforce the various anti-counterfeiting and anti-piracy regimes of their respective jurisdictions which becomes increasingly difficult with the continued expansion of global trade. Our SigNature DNA solution can provide secure, forensic, and cost-effective anti-counterfeiting, anti-piracy and identification solutions to local, state, and federal governments as well as the defense contractors and the other companies that do business with them. Our SigNature solution can be used for all types of identification and official documents, such as:

passports;
lawful permanent resident, or “green” cards;
visas;
drivers’ licenses;
Social Security cards;
military identification cards;
national transportation cards;
security cards for access to sensitive physical locations; and
other important identity cards, official documents and security-related cards.

Textile and Apparel Authentication

Cotton classification and the authentication of cotton geographic origin are issues of global significance, important to brand owners and to governments that must regulate international cotton trade. We believe that our SigNature DNA and BioMaterial Genotyping solutions could have significant potential applications for the enforcement of cotton trade

quotas in the U.S. and across the globe, and for legislated quality improvement within the industry. We believe that similar issues face the wool and other natural product industries which is the next area we plan to target.

Our Technology

Every living organism has a unique DNA code that determines the character and composition of its cells. The core technologies of our business allow us to use the DNA of everyday plants to mark objects in a unique manner that we believe can only be replicated at great expense, and then identify these objects by detecting the absence or presence of the DNA.

SigNature DNA Encryption

Our patent pending encryption system allows us to isolate strands of botanical DNA and then fragment and reconstitute them to form unique “DNA chimers”, or encrypted DNA segments, whose sequences are known only to us.

SigNature DNA Encapsulation

Our patented encapsulation system allows us to apply a protective coating to encrypted DNA chimers, creating a SigNature DNA Marker that is resistant to heat, organic solvents, chemicals and UV radiation, and so can be identified for hundreds of years after being embedded directly, or into media applied or attached to the item to be marked.

SigNature DNA Embedment

Our patented embedment system allows us to incorporate our SigNature DNA Markers into a broad variety of media, such as petroleum and petroleum derivatives, inks, dyes, laminates, glues, threads, and textiles.

SigNature DNA Authentication

Our patent pending forensic level authentication methods allow us to unlock the encrypted DNA chimers by using PCR techniques and proprietary primers that were specifically designed by us to detect the DNA sequences we encrypted and embedded into the product or other item. Detection of the DNA chimers unique to a particular item or series of items allows us to authenticate its or their origin.

Products and Services

Our SigNature DNA solution consists of three steps: creating and encapsulating a specific encrypted DNA segment, applying it to a product or other item, and detecting the presence or absence of the specific segment. We plan for the first two steps to be controlled exclusively by Applied DNA and its certified agents to ensure the security of SigNature DNA Markers. Once applied, the presence of any of our SigNature DNA Markers can be detected by us or a customer in a simple spot test, or a sample taken from the product or other item can be analyzed forensically to obtain definitive proof of the presence or absence of a specific type of SigNature DNA Marker (e.g., one designed to mark a particular product).

Creating a Customer or Product-Specific SigNature DNA Marker

Our SigNature DNA Markers are botanical DNA segments custom manufactured by us to identify a particular class of or individual products or items. During this manufacturing process, we scramble and encrypt a naturally occurring botanical DNA code segment or segments, and then encapsulate the resulting DNA segment utilizing our proprietary SigNature DNA Encapsulation system. We then record and store the sequence of the DNA segment in a secure database in order that we can later detect it.

Embedding the SigNature DNA Marker

Our SigNature DNA Markers may be directly embedded in products or other items, or otherwise attached by embedding them into media that is incorporated in or attached to the product or item. For example, we can embed SigNature DNA Markers directly in paper, metal, plastics, stone, ceramic, and other materials. Media in which we can embed SigNature DNA Markers include:

SigNature DNA Ink: Our SigNature DNA Ink can be applied directly or on a label that is then affixed to the product or item. SigNature DNA Ink is highly durable and degradation resistant. SigNature DNA Ink can be visible (colored) or invisible. This makes it possible to mark products with a visible, or overt, and/or invisible, or covert, SigNature DNA Marker on any tangible surface such as a label. The location of covert Signature DNA Markers on a product are recorded and stored in a secure database. Similar media like varnish and paints can also be used instead of ink. Sporting event tickets have been prototyped using our SigNature DNA Ink. In addition, our SigNature DNA Ink is being tested in government documents, auto parts, luxury goods and consumer products. Other examples of where our SigNature DNA Inks can be used include:

artwork and collectibles (paintings, artifacts, antiques, stamps, coins, documents, collectibles and memorabilia);
corporate documents: (confidential, date and time dependent documents or security clearance documents);
financial instruments (currency, stock certificates, checks, bonds and debentures);
retail items (event tickets, VIP tickets, clothing labels, luxury products);
pharmaceuticals (tablet, capsule and pill surface printing); and
other miscellaneous items (lottery tickets, inspection stamps, custom seals, passports and visas, etc.).

We have also developed a portfolio of SigNature DNA containing thermal transfer ribbons. These products will allow retailers to protect at the point-of-sale by printing price labels, hang tags, event tickets and even credentials with customized SigNature markers. We are also able to mark cartridges of laser printers with SigNature DNA.

AzSure™ Security Ink: We have developed AzSure bank note marking ink at the request of our cash-in-transit customer. This security ink is being marketed to governments and industry to protect bank notes and other financial instruments. We believe the unique visible and fluorescent blue signature of our highly substantive dye/DNA system distinguishes AzSure from all other dyes used within the cash-in-transit industry.

SigNature DNA Thread: Our SigNature DNA Thread, which can consist of any fabric from cotton to wool, is embedded with SigNature DNA Markers and can be used to mark and authenticate products and other items incorporating textiles. For example, SigNature DNA Thread can be incorporated in a finished garment, bag, purse, shoe or other product or item. SigNature DNA Thread can help textile vendors, clothing and accessory manufacturers and governments authenticate thread, yarn and fabric at any stage in the supply chain. We can also embed our SigNature DNA Markers into raw cotton fiber before manufacture of a finished cotton textile product (e.g., a t-shirt) and authenticate a finished cotton product. We are currently working with the Textile Centre of Excellence consortium of companies (Leeds, UK) to demonstrate how our SigNature DNA can be used to authenticate textiles at all points of the supply chain through to the end user. In addition, we are working to demonstrate the integration of SigNature DNA with existing manufacturing processes to produce threads, labels and fabrics manufactured by Yorkshire-based companies.

Other Security Devices: Our SigNature DNA Markers can also be embedded onto printed barcodes, RFID tags, optical memory strips, holograms, tamper proof labels and other security devices incorporated into products and other items for various security-related purposes.

SigNature DNA Detection and Product Authentication

We now offer a full range of detection options from instant rapid screening to more detailed forensic level authentication:

Level 1 “Spot Test” Detection: We offer rapid readers capable of instantly testing for the presence or absence of any of our SigNature DNA Markers.

Level 2 Forensic DNA Authentication: When a forensic level of authentication is necessary, we offer in-field or in-house forensic DNA authentication with a handheld battery powered PCR-based device that will confirm authentication sequences in approximately 10 minutes.

Sales and Marketing

As of December 15, 2008, we had 2 employees devoted to and 3 employees engaged in direct sales. We expect to hire additional sales directors and/or consultants to assist us with sales and marketing efforts with respect to our 6 target vertical markets.

Research and Development

Our research and development efforts are primarily focused on the development of prototypes of new versions of our products using our existing technologies for review by prospective customers, such as different types of SigNature DNA Ink and SigNature DNA Thread. We are also focused on the identification of additional genotyping markers and on the development of new ingredients for the personal care products industry. Nonetheless, we believe that our development of new and enhanced technologies relating to our business may be important to our future success, and we continue to examine whether investments in the research and development of such technologies is merited.

Manufacturing

We have the capability to manufacture SigNature DNA Markers, covert DNA Ink, and SigNature PCR Kits at our laboratories in Stony Brook. We rely upon other companies to manufacture our overt color-changing DNA Ink . We also have in-house capabilities to manufacture all BioActive Ingredients and to complete all BioMaterial Genotyping authentications.

Commercial Agreements and Distribution of our Products

HPT Agreement. On March 19, 2007, we entered into a Technology Reseller Agreement (the "HPT Agreement") with HPT International, LLC ("HPT"). In the HPT Agreement we agreed to supply our SigNature DNA Markers to HPT to be affixed onto HPT's holograms, Nylon 6 tags and other plastic or metal food tags. HPT has been granted exclusive rights to affix our SigNature DNA Markers onto its tagging products for distribution to its customers in the United States in the poultry and kosher foods markets, and non-exclusive rights to attach our SigNature DNA Markers onto its tagging products for distribution to its customers worldwide. We will receive a fee for each SigNature DNA Marker that is attached to an HPT product and distributed to a third party, and for each forensic level authentication test that we perform at HPT's request. HPT has been granted exclusive rights in the U.S. poultry and kosher foods markets with respect to new customers through March 18, 2008. After that date, HPT will lose its exclusive rights if it does not realize certain sales goals or does not agree to certain minimum purchases during the subsequent year of the agreement. Under the HPT Agreement, HPT has the right to permanent exclusivity in the U.S. poultry and kosher foods markets if it realizes its sales goals for the first two years under the HPT Agreement and achieves an additional milestone to be agreed by us and HPT prior to March 18, 2009.

IIMAK Agreement. On April 18, 2007, we entered into a Joint Development and Marketing Agreement with International Imaging Materials, Inc., or IIMAK. In this agreement with IIMAK, the parties agreed to jointly develop thermal transfer ribbons incorporating our SigNature DNA Markers to help prevent counterfeiting and product diversion for an initial six (6) month period. Upon the successful development of commercially feasible ribbons incorporating SigNature DNA Markers, we will be paid royalties based on a calculation of net receipts by IIMAK from sales of such products. We will receive the exclusive right to supply DNA taggants to IIMAK and IIMAK will receive the exclusive right to manufacture and sell such products worldwide. In February 2008, we completed the joint development stage of this agreement and initiated pilot manufacturing of IIMAK thermal transfer ribbons embedded with SigNature DNA.

Champion Thread: On May 8, 2007, we entered into a Product Development, Marketing and Distribution Agreement with Champion Thread Company, or Champion Thread. Under the terms of the Agreement, Champion Thread has been granted exclusive worldwide rights to be the reseller for the thread, yarn, woven labels, and printed labels for textiles markets for an initial period of four years with automatic annual renewals thereafter, subject to either party's right not to renew. We will be paid certain royalties on all sales made by Champion Thread.

Printcolor Screen Ltd. Agreement. On May 30, 2007, we entered into a Technology Reseller Agreement with Printcolor Screen Ltd., or Printcolor. Under the terms of the agreement, we have been granted the exclusive right to supply our SigNature DNA Markers to Printcolor and Printcolor has been granted rights to affix our SigNature DNA Markers onto Printcolor products for distribution to its customers for an initial period of three years. This initial period will automatically renew for successive one year periods unless terminated earlier. We will be paid certain fees based on purchase orders received from Printcolor.

Supima Cotton Agreement. On June 27, 2007, we entered into a Feasibility Study Agreement with Supima, a non-profit organization for the promotion of U.S. pima cotton growers. In connection with the agreement we undertook a study of the feasibility of establishing a method or methods to authenticate and identify U.S. produced pima cotton fibers. We received payments from Supima upon signing of the agreement and in installments beginning

on July 6, 2007 through completion of the feasibility study. The feasibility study was successfully completed in the first quarter of 2008. We plan to begin a preliminary launch of authentication services in 2009 and we may in the future offer authentication services to member companies of Supima (as well as non-member companies) to confirm the Supima cotton content of textile items such as apparel and home fashion products. We are obligated to pay Supima a percentage of any fees that we receive from such companies for authentication services we provide them. We are also obligated to pay Supima fifty percent of the aggregate amount of payments that we received from Supima for the feasibility study out of any fees we receive from providing authentication services. In addition, until the earlier of either (i) five years or (ii) the repayment to Supima of fifty percent of the aggregate amount of payments that we received from Supima for the feasibility study, we are obligated to pay Supima a fee for each authentication service that we provide. The agreement may be terminated by us or Supima after sixty (60) days upon fourteen (14) days prior written notice.

Textile Centre of Excellence. On August 11, 2008, we entered into an Agreement with Huddersfield and District Textile Training Company Limited. We have agreed to undertake a study to demonstrate how our SigNature DNA can be used to authenticate textiles at all points of the supply chain through to the end user. In addition, this study will demonstrate the integration of SigNature DNA with existing manufacturing processes to produce threads, labels and fabrics manufactured by Yorkshire-based companies. The funding for Phase I of the study, which runs through December 2008, totals £50,000. Upon successful completion of Phase I of the study, we anticipate beginning Phase II, which could result in continued funding.

Biowell Agreement. In the first half of 2005, Biowell Technology, Inc. ("Biowell") transferred substantially all of its intellectual property to Rixflex Holdings Limited, a British Virgin Islands company, and on July 12, 2005, Rixflex Holdings Limited merged with and into our wholly-owned subsidiary APDN (B.V.L.) Inc., a British Virgin Islands company. The shareholders of Rixflex Holdings Limited recieved 36 million shares of our common stock in consideration of this merger. In connection with the acquisition of this Biowell intellectual property, we terminated our existing license agreement and on July 12, 2005, we entered into a license agreement with Biowell, under which we granted Biowell an exclusive license to sell, market, and sub-license certain of our products in Australia, certain countries in Asia and certain Middle Eastern countries. By letter dated November 1, 2007, we terminated Biowell's rights as license with respect to Australia, China and certain other countries in Asia because of Biowell's failure to pay us certain fees, payments or consideration in connection with the grant of the license. In addition, we terminated the exclusivity of the license with respect to certain Middle Eastern and other Asian countries because of Biowell's failure to meet certain minimum annual net sales in each of the various countries coverred by the license.

Competition

The principal markets for our offerings are intensely competitive. We compete with many existing suppliers and new competitors continue to enter the market. Many of our competitors, both in the United States and elsewhere, are major pharmaceutical, chemical and biotechnology companies, or have strategic alliances with such companies, and many of them have substantially greater capital resources, marketing experience, research and development staff, and facilities than we do. Any of these companies could succeed in developing products that are more effective than the products that we have or may develop and may be more successful than us in producing and marketing their existing products. Some of our competitors that operate in the anti-counterfeiting and fraud prevention markets include: Applied Optical Technologies, Authentix, ChemTAG, Collectors Universe Inc., Collotype, Data Dot Technology, Digimarc Corp., DNA Technologies, Inc., ID Global, Informium AG, Inksure Technologies, Kodak, L-1 Identity Solutions, Manakoa, SmartWater Technology, Inc., Sun Chemical Corp, Tracetag and Warnex.

Some examples of competing security products include:

- fingerprint scanner (a system that scans fingerprints before granting access to secure information or facilities);
- voice recognition software (software that authenticates users based on individual vocal patterns);
- cornea scanner (a scanner that scan the iris of a user’s eye to compare with data in a computer database);
- face scanner (a scanning system that use complex algorithms to distinguish one face from another);
- integrated circuit chip & magnetic strips (integrated circuit chips that receive and, if authentic, send a correct electric signal back to the reader, and magnetic strips that contain information, both of which are common components of debit and credit cards);
- optically variable microstructures (these include holograms, which display images in three dimensions and are generally difficult to reproduce using advanced color photocopiers and printing techniques, along with other devices with similar features);
- elemental taggants and fluorescence (elemental taggants are various unique substances that can be used to mark products and other items, are revealed by techniques such as x-ray fluorescence); and

radioactivity & rare molecules (radioactive substances or rare molecules which are uncommon and readily detected).

We expect competition with our products and services to continue and intensify in the future. We believe competition in our principal markets is primarily driven by:

product performance, features and liability;
price;
timing of product introductions;
ability to develop, maintain and protect proprietary products and technologies;
sales and distribution capabilities;
technical support and service;
brand loyalty;
applications support; and
breadth of product line.

If a competitor develops superior technology or cost-effective alternatives to our products, our business, financial condition and results of operations could be significantly harmed.

Proprietary Rights

We believe that our 7 patents, 14 patents pending, 2 registered trademarks, and 2 registered trademarks pending, which are described in the table below, and our trademarks, trade secrets, copyrights and other intellectual property rights are important assets for us.

Patents Issued:

Patent Name	Patent No:	Assignee of Record	Dated Issued	Jurisdiction
Nucleic Acid as Marker for Product Anticounterfeiting and Identification	89108443	APDN (B.V.I.) Inc.	March 17,2000	Taiwan
Method of using ribonucleic acid as product antifake mark and for verification	00107580.2	Rixflex Holdings Limited (2)	February 2, 2005	China
EppenLocker (A Leakage-Prevention Apparatus of Microcentrifuge)	89204158	APDN (B.V.I.) Inc.	March 10, 2000	Taiwan
Multiple Tube Structure for Multiple PCR in a Closed Container	89210575	APDN (B.V.I.) Inc.	June 20, 2000	Taiwan
A Device for Multiple Polymerase Chain Reactions In a Closed Container and a Method of Using Thereof	89111477	APDN (B.V.I.) Inc.	June 12, 2000	Taiwan
Method for Mixing Nucleic Acid in Water Insoluble Media and Application Thereof	921221973	APDN (B.V.I.) Inc.	August 11, 2003	Taiwan
A Method of Utilizing Nucleic Acids as Markers for Product Anti-Counterfeit Labeling and Verification	US 7,115,301 B2	Rixflex Holdings Limited (2)	October 3, 2006	United States

Patents Pending:

Patent Name	Application No.	Filed in the Name of	Dated Filed	Jurisdiction
Method for Mixing Nucleic Acid in Water Insoluble Media and Application Thereof	2002-294229	Biowell (1)	August 31, 2002	Japan
	03007023.9	Rixflex Holdings Limited (2)	March 27, 2003	EU
	10/645,602	Rixflex Holdings Limited (2)	August 22, 2003	United States
	03155949.2	APDN (B.V.I.) Inc.	August 27, 2003	China

Method of dissolving nucleic acid in water insoluble medium and its application				
Novel nucleic acid based steganography system and application thereof	10/909,431	Rixflex Holdings Limited (2)	August 3, 2004	United States
Cryptic method of secret information carried in DNA molecule and its deencryption method	921221490	APDN (B.V.I.) Inc.	August 6, 2003	Taiwan
A novel nucleic acid based steganography system and application thereof	03127517.6 61387/2004	Biowell (1) Rixflex Holdings Limited (2)	August 6, 2003 August 4, 2004	China Korea
A novel method for coding based on nucleic acids and utility thereof	04018374.1	Rixflex Holdings Limited (2)	August 3, 2004	EU
	1-2004-00742	Rixflex Holdings Limited (2)	August 4, 2004	Vietnam

Patent Name	Patent No:	Assignee of Record	Dated Issued	Jurisdiction
A novel nucleic acid based steganography system and applications thereof	092819	Rixflex Holdings Limited (2)	August 4, 2004	Thailand
	PI20043145	Biowell (1)	August 4, 2004	Malaysia
	2004-225987	Rixflex Holdings Limited (2)	August 2, 2004	Japan
	P-00200400374	Rixflex Holdings Limited (2)	August 4, 2004	Indonesia
	764/CHE/2004	Rixflex Holdings Limited (2)	August 4, 2004	India
Method for classifying group ID of shoppers and transferring the shopping discount to group development funds development	92119302	APDN (B.V.I.) Inc.	July 15, 2003	Taiwan
Method for transferring feedback foundation capable of identifying multiple objects	03150071.4	APDN (B.V.I.) Inc.	July 31, 2003	China
Method of Classifying Group ID of Shoppers and Transferring the Shopping Discount to Group Development Funds	PI20042889	Rixflex Holdings Limited (2)	August 4, 2004	Malaysia
	092217	Rixflex Holdings Limited (2)	July 12, 2004	Thailand
	2004-200730	Biowell (1)	July 7, 2004	Japan
System and Method for authenticating multiple components associated with a particular product.	11/437,265	APDN (B.V.I.) Inc.	May 19, 2005	US
	PCT/US2006/019660	APDN (B.V.I.) Inc.	May 19, 2006	PCT
System and Method for Marking Textiles with Nucleic Acid	10/825,968	APDN (B.V.I.) Inc.	April 15, 2004	United States
System and Method for Marking Textiles with Nucleic Acids	Publication #20050112610	APDN (B.V.I.) Inc	4/16/2003	United States
System and Method for Authenticating Multiple Components Associated with a	Publication # 22070048761	APDN (B.V.I.) Inc	5/20/2005	United States

Particular Good				
System and Method for Secure Document Printing and Detection	Application # 60/874,425	APDN (B.V.I.) Inc	12/12/2006	United States
System and Method for Authenticating Tablets	Application #60/877,875	APDN (B.V.I.) Inc	12/26/2006	United States
System and Method for Authenticating Sports Identification Goods	Application # 60/877,869	APDN (B.V.I.) Inc.	12/29/2006	United States
Optical Reporter Compositions	11/954,030	APDN (B.V.I.) Inc.	12/11/2007	United States

Patent Name	Patent No:	Assignee of Record	Dated Issued	Jurisdiction
Methods for Covalent Linking of Optical Reporters	11/954,009	APDN (B.V.I.) Inc.	12/11/2007	United States
Method for Authenticating Articles with Optical Reporters	11/954,038	APDN (B.V.I.) Inc.	12/11/2007	United States
Method for Secure Document Printing and Detection	11/954,044	APDN (B.V.I.) Inc.	12/11/2007	United States
Method for Authenticating Sports Identification Goods	11/954,051	APDN (B.V.I.) Inc.	12/11/2007	United States
Method for Authenticating Tablets	11/954,055	APDN (B.V.I.) Inc.	12/11/2007	United States

(1) All patents in the name of and patent applications filed in the name of Biowell have been assigned to our wholly-owned subsidiary APDN (B.V.I.) Inc., and we are making efforts to ensure APDN (B.V.I.) is the assignee or filer of record, as the case may be.

(2) All patents in the name of and patent applications filed in the name of Rixflex Holdings Limited, which merged into APDN (B.V.I.) Inc. on July 12, 2005, have been assigned to APDN (B.V.I.) Inc., and we are making efforts to ensure APDN (B.V.I.) is the assignee or filer of record, as the case may be.

Trademarks Issued:

Trademark	Registration No:	Registered Owner	Registration Date	Jurisdiction
APPLIED DNA and model molecule design	846354	Applied DNA Sciences Inc.	August 13, 2004	Mexico
APPLIED DNA and model molecule design	846711	Applied DNA Sciences Inc.	August 16, 2004	Mexico
APPLIED DNA and model molecule design	3392818	Applied DNA Sciences Inc.	March 21, 2005	European Community
BIOWELL and Design	3,155,578	Rixflex Holdings Limited (1)	October 17, 2006	United States
BIOWELL and Design	2,675,941	Rixflex Holdings Limited (1)	January 21, 2003	United States
BIOWELL and Design	2,611,291	Rixflex Holdings Limited (1)	August 27, 2002	United States
BIOWELL and Design	4101159010000	Biowell (2)	May 4, 2005	South Korea
BIOWELL and Design	4,819,252	Rixflex Holdings Limited (1)	November 19, 2004	Japan

(1) All registered trademarks in the name of Rixflex Holdings Limited have been assigned to APDN (B.V.I.) Inc., and we are making efforts to ensure APDN (B.V.I.) Inc. is the registered owner.

(2) All registered trademarks in the name of Biowell have been assigned to APDN (B.V.I.) Inc., and we are making efforts to ensure APDN (B.V.I.) Inc. is the registered owner.

Trademarks Pending:

Trademark	Application No:	Owner	Filing Date	Jurisdiction
APPLIED DNA	76/549,861	APDN (B.V.I.) Inc.	September 22, 2003	United States
SIGNATURE	78/871,967	APDN (B.V.I.) Inc.	April 28, 2006	United States
FIBERTYPING	77/488.647	APDN (B.V.I.) Inc.	June 2, 2008	United States
PIMATYPING	77/488.531	APDN (B.V.I.) Inc.	June 2, 2008	United States

However, there are events that are outside of our control that pose a threat to our intellectual property rights as well as to our products and services. For example, effective intellectual property protection may not be available in every country in which our products and services are distributed. The efforts we have taken to protect our proprietary rights may not be sufficient or effective. Any significant impairment of our intellectual property rights could harm our business or our ability to compete. Protecting our intellectual property rights is costly and time consuming. Any increase in the unauthorized use of our intellectual property could make it more expensive to do business and harm our operating results. Although we seek to obtain patent protection for our innovations, it is possible we may not be able to protect some of these innovations. Given the costs of obtaining patent protection, we may choose not to protect certain innovations that later turn out to be important. There is always the possibility that the scope of the protection gained from one of our issued patents will be insufficient or deemed invalid or unenforceable. We also seek to maintain certain intellectual property as trade secrets. This secrecy could be compromised by third parties, or intentionally or accidentally by our employees, which would cause us to lose the competitive advantage resulting from these trade secrets.

Additionally, litigation regarding patents and other intellectual property rights is extensive in the biotechnology industry. In the event of an intellectual property dispute, we may be forced to litigate. This litigation could involve proceedings instituted by the U.S. Patent and Trademark Office or the International Trade Commission, as well as proceedings brought directly by affected third parties. Intellectual property litigation can be extremely expensive, and these expenses, as well as the consequences should we not prevail, could seriously harm our business. If a third party claims an intellectual property right to technology we use, we might need to discontinue an important product or product line, alter our products and processes, pay license fees or cease our affected business activities. Although we might under these circumstances attempt to obtain a license to this intellectual property, we may not be able to do so on favorable terms, or at all.

Employees

Presently, we currently have 13 full-time employees and two part-time employees, including two in management, nine in operations, three in sales and marketing and one in investor relations. None of our employees are covered by collective bargaining agreements, and we believe our relations with our employees are favorable.

Available Information

We are subject to the informational requirements of the Exchange Act, which requires us to file our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, amendments to such reports and other information with the Securities and Exchange Commission (“SEC”). This information is available at the SEC’s Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. Because we file documents electronically with the SEC, you may also obtain this information by visiting the SEC’s website at www.sec.gov. Our web site is located at www.adnas.com.

ITEM 1A. RISK FACTORS.

Because of the following factors, as well as other variables affecting our operating results and financial condition, past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods.

Risks Relating to Our Business:

We have a short operating history, a relatively new business model, and have not produced significant revenues. This makes it difficult to evaluate our future prospects and increases the risk that we will not be successful.

We have a short operating history with our current business model, which involves the marketing, sale and distribution anti-counterfeiting and product authentication solutions as well as ingredients for use in personal care and other products. Our operations since inception have produced insignificant revenues, and may not produce significant revenues in the near term, or at all, which may harm our ability to obtain additional financing and may require us to reduce or discontinue our operations. If we create significant revenues in the future, we will derive most of such revenues from the sale of anti-counterfeiting and product authentication solutions as well as ingredients, which are immature industries. You must consider our business and prospects in light of the risks and difficulties we will encounter as an early-stage company in a new and rapidly evolving industry. We may not be able to successfully address these risks and difficulties, which could significantly harm our business, operating results, and financial condition.

We have a history of losses which may continue, and which may harm our ability to obtain financing and continue our operations.

We incurred net losses of $6.8 million for the year ended September 30, 2008 and $13.3 million for the year ended September 30, 2007. These net losses have principally been the result of the various costs associated with our selling, general and administrative expenses as we commenced operations, acquired, developed and validated technologies, began marketing activities, and incurred interest expense on notes and warrants we issued to obtain financing. Our operations are subject to the risks and competition inherent in a company that moved from the development stage to an operating company. We may not generate sufficient revenues from operations to achieve or sustain profitability on a quarterly, annual or any other basis in the future. Our revenues and profits, if any, will depend upon various factors, including whether our existing products and services or any new products and services we develop will achieve any level of market acceptance. If we continue to incur losses, our accumulated deficit will continue to increase, which might significantly impair our ability to obtain additional financing. As a result, our business, results of operations and financial condition would be significantly harmed, and we may be required to reduce or terminate our operations.

We will require additional financing which may require the issuance of additional shares which would dilute the ownership held by our shareholders.

We will need to raise funds through either debt or the sale of our shares in order to achieve our business goals. Although there are no present plans, agreements, commitments or undertakings with respect to the sale of additional shares or securities convertible into any such shares by us, any shares issued would further dilute the percentage ownership held by the stockholders. Furthermore, if we raise funds in equity transactions through the issuance of convertible securities which are convertible at the time of conversion at a discount to the prevailing market price, substantial dilution is likely to occur resulting in a material decline in the price of your shares.

If we are unable to obtain additional financing our business operations will be harmed or discontinued, and if we do obtain additional financing our shareholders may suffer substantial dilution.

We believe that our existing capital resources will enable us to fund our operations until approximately February 2009. We believe we will be required to seek additional capital to sustain or expand our prototype and sample manufacturing, and sales and marketing activities, and to otherwise continue our business operations beyond that date. We have no commitments for any future funding, and may not be able to obtain additional financing or grants on terms acceptable to us, if at all, in the future. If we are unable to obtain additional capital this would restrict our ability to grow and may require us to curtail or discontinue our business operations. Additionally, while a reduction in our business operations may prolong our ability to operate, that reduction would harm our ability to implement our business strategy. If we can obtain any equity financing, it may involve substantial dilution to our then existing shareholders.

Our independent auditors have expressed substantial doubt about our ability to continue as a going concern, which may hinder our ability to obtain future financing.

In their report dated December 15, 2008, our independent auditors stated that our financial statements for the year ended September 30, 2008 were prepared assuming that we would continue as a going concern, and that they have substantial doubt about our ability to continue as a going concern. Our auditors' doubts are based on our incurring net losses of $6.8 million for the year ended September 30, 2008. We continue to experience net operating losses. Our ability to continue as a going concern is subject to our ability to generate a profit and/or obtain necessary funding from outside sources, including by the sale of our securities, obtaining loans from financial institutions, or obtaining grants from various organizations or governments, where possible. Our continued net operating losses and our auditors' doubts increase the difficulty of our meeting such goals and our efforts to continue as a going concern may not prove successful.

If our existing products and services are not accepted by potential customers or we fail to introduce new products and services, our business, results of operations and financial condition will be harmed.

There has been limited market acceptance of our botanical DNA encryption, encapsulation, embedment and authentication products and services to date. Some of the factors that will affect whether we achieve market acceptance of our solutions include:

availability, quality and price relative to competitive solutions;
customers' opinions of the solutions' utility;
ease of use;
consistency with prior practices;
scientists' opinions of the solutions' usefulness;
citation of the solutions in published research; and
general trends in anti-counterfeit and security solutions' research.

The expenses or losses associated with the continued lack of market acceptance of our solutions will harm our business, operating results and financial condition.

Rapid technological changes and frequent new product introductions are typical for the markets we serve. Our future success may depend in part on continuous, timely development and introduction of new products that address evolving market requirements. We believe successful new product introductions may provide a significant competitive advantage because customers invest their time in selecting and learning to use new products, and are often reluctant to switch products. To the extent we fail to introduce new and innovative products, we may lose any market share we then have to our competitors, which will be difficult or impossible to regain. Any inability, for technological or other reasons, to successfully develop and introduce new products could reduce our growth rate or damage our business. We may experience delays in the development and introduction of products. We may not keep pace with the rapid rate of change in anti-counterfeiting and security products' research, and any new products acquired or developed by us may not meet the requirements of the marketplace or achieve market acceptance.

If we are unable to retain the services of Drs. Hayward or Liang we may not be able to continue our operations.

Our success depends to a significant extent upon the continued service of Dr. James A. Hayward, one of our directors, our President and Chief Executive Officer; and Dr. Benjamin Liang, our Secretary and Strategic Technology Development Officer. We do not have employment agreements with Drs. Hayward or Liang. Loss of the services of Drs. Hayward or Liang could significantly harm our business, results of operations and financial condition. We do not maintain key-man insurance on the lives of Drs. Hayward or Liang.

The markets for our anti-counterfeiting and product authentication solutions as well as our BioActive Ingredients are very competitive, and we may be unable to continue to compete effectively these industries in the future.

The principal markets for our our anti-counterfeiting and product authentication solutions as well as our BioActive Ingredients are intensely competitive. We compete with many existing suppliers and new competitors continue to enter the market. Many of our competitors, both in the United States and elsewhere, are major pharmaceutical, chemical and biotechnology companies, or have strategic alliances with such companies, and many of them have substantially greater capital resources, marketing experience, research and development staff, and facilities than we do. Any of these companies could succeed in developing products that are more effective than the products that we have or may develop and may be more successful than us in producing and marketing their existing products. Some of our competitors that operate in the anti-counterfeiting and fraud prevention markets include: Authentix, Collectors Universe Inc., Data Dot Technology, Digimarc Corp., DNA Technologies, Inc., ID Global, Informium AG, Inksure Technologies, Kodak, L-1 Identity Solutions, Manakoa, OpSec Security Group, SmartWater Technology, Inc., Sun

Chemical Corp, and Tracetag.

We expect this competition to continue and intensify in the future. Competition in our markets is primarily driven by:

- product performance, features and liability;
- price;
- timing of product introductions;
- ability to develop, maintain and protect proprietary products and technologies;
- sales and distribution capabilities;
- technical support and service;
- brand loyalty;
- applications support; and
- breadth of product line.

If a competitor develops superior technology or cost-effective alternatives to our products, our business, financial condition and results of operations could be significantly harmed.

We need to expand our sales, marketing and support organizations and our distribution arrangements to increase market acceptance of our products and services.

We currently have few sales, marketing, customer service and support personnel and will need to increase our staff to generate a greater volume of sales and to support any new customers or the expanding needs of existing customers. The employment market for sales, marketing, customer service and support personnel in our industry is very competitive, and we may not be able to hire the kind and number of sales, marketing, customer service and support personnel we are targeting. Our inability to hire qualified sales, marketing, customer service and support personnel may harm our business, operating results and financial condition. We do not currently have any arrangements with any distributors and we may not be able to enter into arrangements with qualified distributors on acceptable terms or at all. If we are not able to develop greater distribution capacity, we may not be able to generate sufficient revenue to support our operations.

A manufacturer’s inability or willingness to produce our goods on time and to our specifications could result in lost revenue and net losses.

Though we manufacture prototypes, samples and some of our own products, we currently do not own or operate any significant manufacturing facilities and depend upon independent third parties for the manufacture of some of our products to our specifications. The inability of a manufacturer to ship orders of such products in a timely manner or to meet our quality standards could cause us to miss the delivery date requirements of our customers for those items, which could result in cancellation of orders, refusal to accept deliveries or a reduction in purchase prices, any of which could harm our business by resulting in decreased revenues or net losses upon sales of products, if any sales could be made.

If we need to replace manufacturers, our expenses could increase, resulting in smaller profit margins.

We compete with other companies for the production capacity of our manufacturers and import quota capacity. Some of these competitors have greater financial and other resources than we have, and thus may have an advantage in the competition for production and import quota capacity. If we experience a significant increase in demand, or if our existing manufacturers must be replaced, we will need to establish new relationships with another or multiple manufacturers. We cannot assure you that this additional third party manufacturing capacity will be available when required on terms that are acceptable to us or terms similar to those we have with our existing manufacturers, either from a production standpoint or a financial standpoint. We do not have long-term contracts with our manufacturers, and our manufacturers do not produce our products exclusively. Should we be forced to replace our manufacturers, we may experience an adverse financial impact, or an adverse operational impact, such as being forced to pay increased costs for such replacement manufacturing or delays upon distribution and delivery of our products to our customers, which could cause us to lose customers or lose revenues because of late shipments.

If a manufacturer fails to use acceptable labor practices, we might have delays in shipments or face joint liability for violations, resulting in decreased revenue and increased expenses.

While we require our independent manufacturers to operate in compliance with applicable laws and regulations, we have no control over their ultimate actions. While our internal and vendor operating guidelines promote ethical business practices and our staff and buying agents periodically visit and monitor the operations of our independent manufacturers, we do not control these manufacturers or their labor practices. The violation of labor or other laws by our independent manufacturers, or by one of our licensing partners, or the divergence of an independent manufacturer’s or licensing partner’s labor practices from those generally accepted as ethical in the United States, could interrupt, or

otherwise disrupt the shipment of finished products to us or damage our reputation. Any of these, in turn, could have a material adverse effect on our financial condition and results of operations, such as the loss of potential revenue and incurring additional expenses.

Failure to license new technologies could impair sales of our existing products or any new product development we undertake in the future.

To generate broad product lines, it is advantageous to sometimes license technologies from third parties rather than depend exclusively on the development efforts of our own employees. As a result, we believe our ability to license new technologies from third parties is and will continue to be important to our ability to offer new products. In addition, from time to time we are notified or become aware of patents held by third parties that are related to technologies we are selling or may sell in the future. After a review of these patents, we may decide to seek a license for these technologies from these third parties. There can be no assurance that we will be able to successfully identify new technologies developed by others. Even if we are able to identify new technologies of interest, we may not be able to negotiate a license on favorable terms, or at all. If we lose the rights to patented technology, we may need to discontinue selling certain products or redesign our products, and we may lose a competitive advantage. Potential competitors could license technologies that we fail to license and potentially erode our market share for certain products. Intellectual property licenses would typically subject us to various commercialization, sublicensing, minimum payment, and other obligations. If we fail to comply with these requirements, we could lose important rights under a license. In addition, certain rights granted under the license could be lost for reasons beyond our control, and we may not receive significant indemnification from a licensor against third party claims of intellectual property infringement.

Our failure to manage our growth in operations and acquisitions of new product lines and new businesses could harm our business.

Any growth in our operations, if any, will place a significant strain on our current management resources. To manage such gro

operations and financial systems;
procedures and controls; and
training and management of our employees.

Our future growth, if any, may be attributable to acquisitions of new product lines and new businesses. Future acquisitions, if successfully consummated, would likely create increased working capital requirements, which would likely precede by several months any material contribution of an acquisition to our net income. Our failure to manage growth or future acquisitions successfully could seriously harm our operating results. Also, acquisition costs could cause our quarterly operating results to vary significantly. Furthermore, our stockholders would be diluted if we financed the acquisitions by incurring convertible debt or issuing securities.

Although we currently only have operations within the United States, if we were to acquire an international operation; we woul

difficulties in staffing, managing and integrating international operations due to language, cultural or other differences;
different or conflicting regulatory or legal requirements;
foreign currency fluctuations; and
diversion of significant time and attention of our management.

Failure to attract and retain qualified scientific, production and managerial personnel could harm our business.

Recruiting and retaining qualified scientific and production personnel to perform and manage prototype, sample, and product manufacturing and business development personnel to conduct business development are critical to our success. In addition, our desired growth and expansion into areas and activities requiring additional expertise, such as clinical testing, government approvals, production, and marketing will require the addition of new management personnel and the development of additional expertise by existing management personnel. Because the industry in

which we compete is very competitive, we face significant challenges attracting and retaining a qualified personnel base. Although we believe we have been and will be able to attract and retain these personnel, we may not be able to continue to successfully attract qualified personnel. The failure to attract and retain these personnel or, alternatively, to develop this expertise internally would harm our business since our ability to conduct business development and manufacturing will be reduced or eliminated, resulting in lower revenues. We generally do not enter into employment agreements requiring our employees to continue in our employment for any period of time.

Our intellectual property rights are valuable, and any inability to protect them could reduce the value of our products, services and brand.

Our patents, trademarks, trade secrets, copyrights and all of our other intellectual property rights are important assets for us. There are events that are outside of our control that pose a threat to our intellectual property rights as well as to our products and services. For example, effective intellectual property protection may not be available in every country in which our products and services are distributed. The efforts we have taken to protect our proprietary rights may not be sufficient or effective. Any significant impairment of our intellectual property rights could harm our business or our ability to compete. Protecting our intellectual property rights is costly and time consuming. Any increase in the unauthorized use of our intellectual property could make it more expensive to do business and harm our operating results. Although we seek to obtain patent protection for our innovations, it is possible we may not be able to protect some of these innovations. Given the costs of obtaining patent protection, we may choose not to protect certain innovations that later turn out to be important. There is always the possibility that the scope of the protection gained from one of our issued patents will be insufficient or deemed invalid or unenforceable. We also seek to maintain certain intellectual property as trade secrets. The secrecy could be compromised by third parties, or intentionally or accidentally by our employees, which would cause us to lose the competitive advantage resulting from these trade secrets.

Intellectual property litigation could harm our business.

Litigation regarding patents and other intellectual property rights is extensive in the biotechnology industry. In the event of an intellectual property dispute, we may be forced to litigate. This litigation could involve proceedings instituted by the U.S. Patent and Trademark Office or the International Trade Commission, as well as proceedings brought directly by affected third parties. Intellectual property litigation can be extremely expensive, and these expenses, as well as the consequences should we not prevail, could seriously harm our business.

If a third party claims an intellectual property right to technology we use, we might need to discontinue an important product or product line, alter our products and processes, pay license fees or cease our affected business activities. Although we might under these circumstances attempt to obtain a license to this intellectual property, we may not be able to do so on favorable terms, or at all. Furthermore, a third party may claim that we are using inventions covered by the third party's patent rights and may go to court to stop us from engaging in our normal operations and activities, including making or selling our product candidates. These lawsuits are costly and could affect our results of operations and divert the attention of managerial and technical personnel. A court may decide that we are infringing the third party's patents and would order us to stop the activities covered by the patents. In addition, a court may order us to pay the other party damages for having violated the other party's patents. The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods of use either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid, and we may not be able to do this. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents.

Because some patent applications in the United States may be maintained in secrecy until the patents are issued, because patent applications in the United States and many foreign jurisdictions are typically not published until eighteen months after filing, and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our or our licensor's issued patents or pending applications or that we or our licensors were the first to invent the technology. Our competitors may have filed, and may in the future file, patent applications covering technology similar to ours. Any such patent application may have priority over our or our licensors' patent applications and could further require us to obtain rights to issued patents covering such technologies. If another party has filed a United States patent application

on inventions similar to ours, we may have to participate in an interference proceeding declared by the United States Patent and Trademark Office to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in a loss of our United States patent position with respect to such inventions.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations.

Accidents related to hazardous materials could adversely affect our business.

Some of our operations require the controlled use of hazardous materials. Although we believe our safety procedures comply with the standards prescribed by federal, state, local and foreign regulations, the risk of accidental contamination of property or injury to individuals from these materials cannot be completely eliminated. In the event of an accident, we could be liable for any damages that result, which could seriously damage our business and results of operations.

Potential product liability claims could affect our earnings and financial condition.

We face a potential risk of liability claims based on our products and services, and we have faced such claims in the past. Though we have product liability insurance coverage which we believe is adequate, we may not be able to maintain this insurance at reasonable cost and on reasonable terms. We also cannot assure that this insurance, if obtained, will be adequate to protect us against a product liability claim, should one arise. In the event that a product liability claim is successfully brought against us, it could result in a significant decrease in our liquidity or assets, which could result in the reduction or termination of our business.

Litigation generally could affect our financial condition and results of operations.

We generally may be subject to claims made by and required to respond to litigation brought by customers, former employees, former officers and directors, former distributors and sales representatives, and vendors and service providers. We have faced such claims and litigation in the past and we cannot assure that we will not be subject to claims in the future. In the event that a claim is successfully brought against us, considering our lack of material revenue and the losses our business has incurred for the period from our inception to September 30, 2008, this could result in a significant decrease in our liquidity or assets, which could result in the reduction or termination of our business.

We were obligated to pay liquidated damages as a result of our failure to have our registration statement declared effective prior to June 15, 2005, and any payment of liquidated damages will either result in depletion of our limited working capital or issuance of shares of common stock which would cause dilution to our existing shareholders.

Pursuant to the terms of a registration rights agreement with respect to common stock underlying convertible notes and warrants we issued in private placements in November and December, 2003, December, 2004, and January and February, 2005, for each month after June 15, 2005 that we did not have a registration statement registering the shares underlying these convertible notes and warrants declared effective, we were obligated to pay liquidated damages in the amount of 3.5% per month of the face amount of the notes, an amount equal to $367,885. On July 24, 2008, the SEC declared effective our registration statement with respect to common stock underlying convertible notes and warrants we issued in private placements in November and December, 2003, December, 2004, and January and February, 2005. At our option, these liquidated damages can be paid in cash or unregistered shares of our common stock. To date we have decided to pay certain of these liquidated damages in common stock, although any future payments of liquidated damages may, at our option, be made in cash. If we decide to pay such liquidated damages in cash, we would be required to use our limited working capital and potentially raise additional funds. If we decide to pay the liquidated damages in shares of common stock, the number of shares issued would depend on our stock price at the time that payment is due. Based on the closing market prices of $0.66, $0.58, $0.70, $0.49, $0.32 and $0.20 for our common stock on July 15, 2005, August 15, 2005, September 15, 2005, October 17, 2005, November 15, 2005 and December 15, 2005, respectively, we issued a total of 3,807,375 shares of common stock in liquidated damages from August, 2005 to January, 2006 to persons who invested in the January and February, 2005 private placements. The issuance of shares upon any payment by us of further liquidated damages will have the effect of further diluting the proportionate equity interest and voting power of holders of our common stock, including investors in this offering.

We paid liquidated damages in the form of common stock only for the period from June 15, 2005 to December 15, 2005, and only to persons who invested in the January and February, 2005 private placements. We believe that we have no enforceable obligation to pay liquidated damages to holders of any shares we agreed to register under the registration rights agreement for periods after the first anniversary of the date of issuance of such shares, since they were eligible for resale under Rule 144 of the Securities Act during such periods, and such liquidated damages are grossly inconsistent with actual damages to such persons. Nonetheless, as of September 30, 2008 we have accrued approximately $12.0 million in penalties representing further liquidated damages associated with our failure to have the registration statement declared effective by the deadline, and have included this amount in accounts payable and accrued expenses.

Matter voluntarily reported to the Securities and Exchange Commission

During the months of March, May, July and August 2005, we issued a total of 8,550,000 shares of our common stock to certain employees and consultants pursuant to the 2005 Incentive Stock Plan. We engaged our outside counsel to conduct an investigation of the circumstances surrounding the issuance of these shares. On April 26, 2006, we voluntarily reported the findings from this investigation to the SEC, and agreed to provide the SEC with further information arising from the investigation. We believe that the issuance of 8,000,000 shares to employees in July 2005 was effectuated by both our former President and our former Chief Financial Officer/Chief Operating Officer without approval of our board of directors. These former officers received a total of 3,000,000 of these shares. In addition, it appears that the 8,000,000 shares issued in July 2005, as well as an additional 550,000 shares issued to employees and consultants in March, May and August 2005, were improperly issued without a restrictive legend stating that the shares could not be resold legally except in compliance with the Securities Act of 1933, as amended. The members of the Company's management who effectuated the stock issuances no longer work for the Company. These shares were not registered under the Securities Act of 1933, or the securities laws of any state, and we believe that certain of these shares may have been sold on the open market, though we have been unable to determine the magnitude of such sales. Since our voluntary report of the findings of our internal investigation to the SEC on April 26, 2006, we have received no communication from the SEC or any third party with respect to this matter. If violations of securities laws occurred in connection with the resale of certain of these shares, the employees and consultants or persons who purchased shares from them may have rights to have their purchase rescinded or other claims against us for violation of securities laws, which could harm our business, results of operations, and financial condition.

Risks Relating to Our Common Stock:

There are a large number of shares underlying our options and warrants that may be available for future sale and the sale of these shares may depress the market price of our common stock and will cause immediate and substantial dilution to our existing stockholders.

As of December 15, 2008, we had 231,870,731 shares of common stock issued and outstanding and outstanding options and warrants to purchase 70,635,964 shares of common stock. All of the shares issuable upon exercise of our options and warrants may be sold without restriction. The sale of these shares may adversely affect the market price of our common stock. The issuance of shares upon exercise of options and warrants will cause immediate and substantial dilution to the interests of other stockholders since the selling stockholders may convert and sell the full amount issuable on exercise.

If we fail to remain current on our reporting requirements, we could be removed from the OTC bulletin board which would limit the ability of broker-dealers to sell our securities and the ability of stockholders to sell their securities in the secondary market.

Companies trading on The Over The Counter Bulletin Board (the “OTC Bulletin Board”), such as us, must be reporting issuers under Section 12 or Section 15(d) of the Securities Exchange Act of 1934, as amended, and must be current in their reports under Section 13, in order to maintain price quotation privileges on the OTC Bulletin Board. If we fail to remain current on our reporting requirements, we could be removed from the OTC Bulletin Board. As a result, the market liquidity for our securities could be severely adversely affected by limiting the ability of broker-dealers to sell our securities and the ability of stockholders to sell their securities in the secondary market. Prior to May 2001, we were delinquent in our reporting requirements, having failed to file our quarterly and annual reports for the years ended 1998 – 2000 (except the quarterly reports for the first two quarters of 1999). We have been current in our reporting requirements for the last six years, however, there can be no assurance that in the future we will always be current in our reporting requirements.

We may not be able to implement section 404 of the Sarbanes Oxley Act of 2002 on a timely basis.

The SEC, as directed by Section 404 of the Sarbanes-Oxley Act, adopted rules generally requiring each public company to include a report of management on the company's internal controls over financial reporting in its annual report on Form 10-K that contains an assessment by management of the effectiveness of the company's internal controls over financial reporting. This requirement first applied to our annual report on Form 10-K for the fiscal year ending September 30, 2008. Under current rules, commencing with our annual report for the fiscal year ending September 30, 2010 our independent registered accounting firm must attest to and report on management's assessment of the effectiveness of our internal controls over financial reporting.

We have not yet developed a Section 404 implementation plan. We have in the past discovered, and may in the future discover, areas of our internal controls that need improvement. How companies should be implementing these new requirements including internal control reforms to comply with Section 404's requirements and how independent auditors will apply these requirements and test companies' internal controls, is still reasonably uncertain.

We expect that we will need to hire and/or engage additional personnel and incur incremental costs in order to complete the work required by Section 404. We may not be able to complete a Section 404 plan on a timely basis. Additionally, upon completion of a Section 404 plan, we may not be able to conclude that our internal controls are effective, or in the event that we conclude that our internal controls are effective, our independent accountants may disagree with our assessment and may issue a report that is qualified. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations.

Our common stock is subject to the “penny stock” rules of the SEC and the trading market in our securities is limited, which makes transactions in our stock cumbersome and may reduce the value of an investment in our stock.

The SEC has adopted Rule 15g-9 which establishes the definition of a “penny stock,” for the purposes relevant to us, as any equity security that has a market price of less than $5.00 per share or with an exercise price of less than $5.00 per share, subject to certain exceptions. For any transaction involving a penny stock, unless exempt, the rules require:

that a broker or dealer approve a person’s account for transactions in penny stocks; and
the broker or dealer receive from the investor a written agreement to the transaction, setting forth the identity and quantity of the penny stock to be purchased.

In order to approve a person’s account for transactions in penny stocks, the broker or dealer must:

obtain financial information and investment experience objectives of the person; and
make a reasonable determination that the transactions in penny stocks are suitable for that person and the person has sufficient knowledge and experience in financial matters to be capable of evaluating the risks of transactions in penny stocks.

The broker or dealer must also deliver, prior to any transaction in a penny stock, a disclosure schedule prescribed by the SEC relating to the penny stock market, which, in highlight form:

sets forth the basis on which the broker or dealer made the suitability determination; and
that the broker or dealer received a signed, written agreement from the investor prior to the transaction.

Generally, brokers may be less willing to execute transactions in securities subject to the “penny stock” rules. This may make it more difficult for investors to dispose of our common stock and cause a decline in the market value of our stock.

Disclosure also has to be made about the risks of investing in penny stocks in both public offerings and in secondary trading and about the commissions payable to both the broker-dealer and the registered representative, current quotations for the securities and the rights and remedies available to an investor in cases of fraud in penny stock transactions. Finally, monthly statements have to be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

We have received no written comments regarding our periodic or current reports from the staff of the Securities and Exchange Commission that were issued 180 days or more preceding the end of our 2008 fiscal year and that remained unresolved.

ITEM 2. PROPERTIES.

We maintain our principal office at 25 Health Sciences Drive, Suite 113, Stony Brook, New York 11790. We moved our principal office to the Long Island High Technology Incubator, which is located on the campus of Stony Brook University, in November 2005. We believe that our current office space and facilities are sufficient to meet our present needs and do not anticipate any difficulty securing alternative or additional space, as needed, on terms acceptable to us.

ITEM 3. LEGAL PROCEEDINGS.

From time to time, we may become involved in various lawsuits and legal proceedings which arise in the ordinary course of business. However, litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. Except as described below, we are currently not aware of any such legal proceedings that we believe will have, individually or in the aggregate, a material adverse affect on our business, financial condition or operating results.

Douglas A. Falkner v. Applied DNA Sciences, Inc./N.C. Industrial Commission File No. 585698

Plaintiff Douglas Falkner ("Falkner") filed a worker's compensation claim in North Carolina for an alleged work-related neck injury that he alleges occurred on January 14, 2004. Falkner worked as Business Development and Operations Manager at our sole East Coast office at the time of the alleged injury. Falkner was the only employee employed by us in North Carolina at the time of the alleged injury and we have employed no other employees in North Carolina at any other time. The claim has been denied and is being defended on several grounds, including the lack of both personal and subject matter jurisdiction. Specifically, we contend that we did not employ the requisite minimum number of employees in North Carolina at the time of the alleged injury and that the company is therefore not subject to the North Carolina Workers' Compensation Act. The claim was originally set for hearing in January 2007, but was continued to allow the parties to engage in further discovery.

Douglas A. Falkner v. Applied DNA Sciences, Inc. (Los Angeles County Superior Court Case No. BC 386557):

Falkner filed a claim on March 3, 2008 asserting counts for breach of contract under his employment agreements dated March 10, 2003 and June 16, 2003 and wrongful discharge in violation of public policy. The relief sought includes compensatory damages in an aggregate amount of approximately $1.7 million, unspecified exemplary and punitive damages, and attorneys' fees. We have filed a motion for summary judgment that will be heard on February 19, 2009. The trial is currently set for March 24, 2009. We intend to vigorously defend against the claims asserted against us.

Intervex, Inc. v. Applied DNA Sciences, Inc. (Supreme Court of the State of New York Index No.08-601219):

Intervex, Inc., or Intervex, the plaintiff, filed a complaint on or about April 23, 2008 related to a claim for breach of contract. In March 2005, we entered into a consulting agreement with Intervex, which provided for, among other things, a payment of $6,000 per month for a period of 24 months, or an aggregate of $144,000. In addition, the consulting agreement provided for the issuance by us to Intervex of a five-year warrant to purchase 250,000 shares of our common stock with an exercise price of $.75. Intervex asserts that we owe it 17 payments of $6,000, or an aggregate of $102,000, plus accrued interest thereon, and a warrant to purchase 250,000 shares of our common stock. We have counterclaimed for compensatory and punitive damages, restitution, attorneys' fees and costs, interest and other relief the court deems proper. This matter is in the early stages of discovery. We intend to vigorously defend against the claims asserted against us.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

None.

PART II

ITEM 5. MARKET FOR COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Market Information

Our Common Stock is quoted on The Over The Counter Bulletin Board (the "OTC Bulletin Board") maintained by the National Association of Securities Dealers under the symbol "APDN." There is no certainty that the Common Stock will continue to be quoted or that any liquidity exists for our shareholders.

The following table sets forth the quarterly quotes of high and low prices for our Common Stock on the OTC Bulletin Board during the fiscal years ended September 30, 2007 and September 30, 2008.

	Fiscal 2007		Fiscal 2008	
	High	Low	High	Low
First Quarter	$ 0.12	$ 0.07	$ 0.17	$ 0.09
Second Quarter	$ 0.28	$ 0.09	$ 0.22	$ 0.09
Third Quarter	$ 0.23	$ 0.10	$ 0.14	$ 0.09
Fourth Quarter	$ 0.15	$ 0.08	$ 0.10	$ 0.03

Holders

As of December 15, 2008, we had approximately 1,119 holders of our common stock. The number of record holders was determined from the records of our transfer agent and does not include beneficial owners of common stock whose shares are held in the names of various security brokers, dealers, and registered clearing agencies. The transfer agent of our common stock is American Stock Transfer & Trust Company, 6201 15th Avenue, Brooklyn, New York 11219.

Dividends

We have never declared or paid any cash dividends on our common stock. We do not anticipate paying any cash dividends to stockholders in the foreseeable future. In addition, any future determination to pay cash dividends will be at the discretion of the Board of Directors and will be dependent upon our financial condition, results of operations, capital requirements, and such other factors as the Board of Directors deem relevant.

Recent Sales of Unregistered Securities

Other than as previously described in our Quarterly Reports on Form 10-Q-SB or in our Current Reports on Form 8-K, there were no sales of unregistered securities during fiscal 2008.

ITEM 6. SELECTED FINANCIAL DATA.

The Company is a smaller reporting company as defined by Rule 12-b-2 of the Exchange Act and is not required to provide the information required under this item.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion should be read in conjunction with our Consolidated Financial Statements and Notes thereto, included elsewhere within this report. The Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, including statements using terminology such as "can", "may", "believe", "designated to", "will", "expect", "plan", "anticipate", "estimate", "potential" o the negative thereof or other comparable terminology regarding beliefs, plans, expectations or intentions regarding the future. You should read statements that contain these words carefully because they:

- discuss our future expectations;
- contain projections of our future results of operations or of our financial condition; and
- state other "forward-looking" information.

We believe it is important to communicate our expectations. However, forward looking statements involve risks and uncertainties and our actual results and the timing of certain events could differ materially from those discussed in forward-looking statements as a result of certain factors, including those set forth under “Risk Factors,” “Business” and elsewhere in this report. All forward-looking statements and risk factors included in this document are made as of the date hereof, based on information available to us as of the date thereof, and we assume no obligations to update any forward-looking statement or risk factor, unless we are required to do so by law.

Introduction

We use the DNA of plants and innovative technologies to provide anti-counterfeiting and product authentication solutions and to manufacture ingredients for personal care products and textiles. SigNature® DNA and BioMaterial™ Genotyping, our principal anti-counterfeiting and product authentication solutions, allow users to accurately and effectively protect branded products, artwork and collectibles, fine wine, digital media, financial instruments, identity cards and other official documents. Our BioActive™ Ingredients, which are being used by our customers in personal care products, such as skin care products, and in textiles, such as intimate apparel, are custom-manufactured to address a customer’s specific need.

SigNature DNA. We use the DNA of plants to manufacture highly customized and encrypted botanical DNA markers, or SigNature DNA Markers, which we believe are virtually impossible to replicate. We have embedded SigNature DNA Markers into a range of our customers' products, including various inks, thermal ribbon, thread, varnishes and adhesives. These items can then be tested for the presence of SigNature DNA Markers through an instant field detection or a forensic level authentication. Our SigNature DNA solution provides a secure, accurate and cost-effective means for users to incorporate our SigNature DNA Markers in, and then quickly and reliably authenticate and identify, a broad range of items such as branded products, artwork and collectibles, cash-in-transit, fine wine, digital media, financial instruments, identity cards and other official documents. Having the ability to reliably authenticate and identify counterfeit versions of such items enables companies and governments to detect, deter, interdict and prosecute counterfeiting enterprises and individuals.

BioMaterial GenoTyping. Our BioMaterial GenoTyping solution refers to the development of genetic assays to distinguish between varieties or strains of biomaterials, such as cotton, wool, tobacco, fermented beverages, natural drugs and foods, that contain their own source DNA. We have developed two proprietary genetic tests (FiberTyping™ and PimaTyping™) to track American Pima cotton from the field to finished garments. These genetic assays provide the cotton industry with the first authentication tools that can be applied throughout the U.S. and worldwide cotton industry from cotton growers, mills, wholesalers, distributors, manufacturers and retailers through trade groups and government agencies.

BioActive Ingredients. Our BioActive Ingredients program began in 2007, based on the biofermentation expertise developed from our experience with the manufacture of DNA for our SigNature DNA and BioMaterial Genotyping solutions. We initially targeted potential customers in the personal care products, industry, and we developed DermalRx Hydroseal, which has been incorporated into the fabric of a new line of intimate apparel currently being test marketed by a global marketer of intimate apparel. In addition, we developed DermalRx SRC, Skin Resurfacing Complex, an ingredient designed to promote smoother more radiant skin by stimulating the skin's own exfoliation process.

General

We expect to generate revenues principally from sales of our SigNature Program, BioMaterial Genotyping and BioActive Ingredients. We are currently attempting to develop business in the following target markets: art and collectibles, cash-in-transit, fine wine, consumer products, digital recording media, pharmaceuticals, and homeland security driven programs. We intend to pursue both domestic and international sales opportunities in each of these vertical markets.

Critical Accounting Policies

Financial Reporting Release No. 60, published by the SEC, recommends that all companies include a discussion of critical accounting policies used in the preparation of their financial statements. While all these significant accounting policies impact our financial condition and results of operations, we view certain of these policies as critical. Policies determined to be critical are those policies that have the most significant impact on our consolidated financial statements and require management to use a greater degree of judgment and estimates. Actual results may differ from those estimates.

We believe that given current facts and circumstances, it is unlikely that applying any other reasonable judgments or estimate methodologies would cause a material effect on our consolidated results of operations, financial position or liquidity for the periods presented in this report.

The accounting policies identified as critical are as follows:

Equity issued with registration rights;
Revenue recognition;
Allowance for Doubtful Accounts; and
Fair value of intangible assets.

Equity Issued with Registration Rights

In connection with placement of our convertible notes and warrants to certain investors during the fiscal quarters ended December 31, 2003, December 31, 2004, March 31, 2005, March 31, 2006 and June 30, 2006, we granted certain registration rights that provide for liquidated damages in the event of failure to timely perform under the agreements. Although these notes and warrants do not provide for net-cash settlement, the existence of liquidated damages provides for a defacto net-cash settlement option. Therefore, the common stock underlying the notes and warrants subject to such liquidated damages does not meet the tests required for shareholders' equity classification in the past, and accordingly has been reflected between liabilities and equity in our previous consolidated balance sheet.

In September 2007, we exchanged our common stock for the remaining Secured Convertible Promissory Note that contained embedded derivatives such as certain conversion features, variable interest features, call options and default provisions.

We had an accumulative accrual of $12,023,888 in liquidating damages in relationship to the previously outstanding convertible promissory notes and related warrants.

Revenue Recognition

Revenues are derived from research, development, qualification and production testing for certain commercial products.

Revenue from fixed price testing contracts is generally recorded upon completion of the contracts, which are generally short-term, or upon completion of identifiable contractual tasks. At the time the Company enters into a contract that includes multiple tasks, the Company estimates the amount of actual labor and other costs that will be required to complete each task based on historical experience. Revenues are recognized which provide for a profit margin relative to the testing performed. Revenue relative to each task and from contracts which are time and materials based is recorded as effort is expended. Billings in excess of amounts earned are deferred. Any anticipated losses on contracts are charged to income when identified. To the extent management does not accurately forecast the level of effort required to complete a contract, or individual tasks within a contract, and the Company is unable to negotiate additional billings with a customer for cost over-runs, the Company may incur losses on individual contracts. All selling, general and administrative costs are treated as period costs and expensed as incurred.

Allowance for Uncollectible Receivables

The Company maintains an allowance for doubtful accounts for estimated losses resulting from the inability of customers to make required payments. The Company uses a combination of write-off history, aging analysis and any specific known troubled accounts in determining the allowance. If the financial condition of customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances could be required.

Fair Value of Intangible Assets

We have adopted SFAS No. 142, Goodwill and Other Intangible Assets, whereby we periodically test our intangible assets for impairment. On an annual basis, and when there is reason to suspect that their values have been diminished or impaired, these assets are tested for impairment, and write-downs will be included in results from operations. During the years ended September 30, 2008 and 2007, our management performed an evaluation of the Company's intangible assets (intellectual property) for purposes of determining the implied fair value of the assets at September 30, 2008 and 2007, respectively. The tests indicated that the recorded remaining book value of its intellectual property did not exceed its fair value for those respective years, as determined by discounted future cash flows. Considerable management judgment is necessary to estimate the fair value. Accordingly, actual results could

vary significantly from management's estimates.

Use of Estimates

In preparing financial statements in conformity with accounting principles generally accepted in the United States of America, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and revenue and expenses during the reporting period. The most significant estimates relate to the estimation of percentage of completion on uncompleted contracts, valuation of inventory, allowance for doubtful accounts and estimated life of customer lists. Actual results could differ from those estimates.

Comparison of the year Ended September 30, 2008 to the year ended September 30, 2007

Revenues

For the years ended September 30, 2008 and 2007, we generated $873,010 and $121,920 in revenues from operations, respectively. Our cost of sales for the year ended September 30, 2008 was $171,332, netting us a gross profit of $701,678. Our cost of sales for the year ended September 30, 2007 was $23,073, netting us a gross profit of $98,847.

Costs and Expenses

Selling, General and Administrative

Selling, general and administrative expenses for the twelve months ended September 30, 2008 decreased 65% to $4.3 million from $12.1 million in the same period in 2007. Included within the selling, general and administrative expenses for the years ended September 30, 2008 and 2007 were expenses relating to liquidation damage accrual, fund raising and consultant costs of $1.1 million and $7.9 million, respectively.

Research and Development

Research and development expenses increased $34,987 for the twelve months ended September 30, 2008 compared to the same period in 2007 from $110,845 to $145,832, primarily due to customer related activity in research and development with our change in focus to marketing activities.

Depreciation and Amortization

In the twelve months ended September 30, 2008, depreciation and amortization increased $1,834 for the period compared to 2007 from $432,582 to $434,416. The increase is attributable to the increase of fixed assets acquired during the year ended September 30, 2008.

Total Operating Expenses

Total operating expenses decreased to $4.9 million from $12.6 million, or a decrease of $7.7 million, primarily due to the reduction in accrual for liquidation damages and less consulting costs for the year ended September 30, 2008 as compared to September 30, 2007.

Other Income/Loss

Other income for the twelve months ended September 30, 2008 decreased from a gain of $1.4 million to $0 million. Other income for the year ended September 30, 2007 was a result primarily from the change in fair value of our recorded warrant liabilities.

As of September 30, 2007, we exchanged common stock for the previously issued Convertible Promissory Notes that contained certain embedded derivative financial instruments. As a result, we reclassified the warrant liabilities recorded in conjunction with the convertible promissory notes to equity as of the conversion date of the remaining note.

Interest Expenses

Interest expenses for the twelve months ended September 30, 2008, increased to $2.6 million from $2.2 million in the same period of 2007, a increase of $0.4 million, as a result of additional borrowings.

Net Income (loss)

Net loss for the twelve months ended September 30, 2008 decreased to a loss of $6.8 million from a loss of $13.3 million in the prior period as a result of the combination of factors described above.

Liquidity and Capital Resources

Our liquidity needs consist of our working capital requirements, indebtedness payments and research and development expenditure funding. Historically, we have financed our operations through the sale of equity and convertible debt as well as borrowings from various credit sources.

As of September 30, 2008, we had a working capital deficit of $15.6 million. For the year ended September 30, 2008, we generated a net cash flow deficit from operating activities of $2.9 million consisting primarily of year to date losses of $6.8 million. Non cash adjustments included $3.2 million in depreciation and amortization charges and $1.0 million for common stock issued in exchange for services. Additionally we had a net increase in current assets of $0.05 million and a net decrease in current liabilities of $0.3 million. Cash provided by investing activities totaled $0.4 million, primarily provided by reduction in cash held in escrow net with $0.02 million in acquisition of property and equipment. Cash provided by financing activities for the year ended September 30, 2008 totaled $2.7 million consisting of proceeds from issuance of convertible debt.

We expect capital expenditures to be less than $150,000 in fiscal 2009. Our primary investments will be in laboratory equipment to support prototyping and our authentication services.

Exploitation of potential revenue sources will be financed primarily through the sale of securities and convertible debt, exercise of outstanding warrants, issuance of notes payable and other debt or a combination thereof, depending upon the transaction size, market conditions and other factors.

While we have raised capital to meet our working capital and financing needs in the past, additional financing is required within the next 3 months in order to meet our current and projected cash flow deficits from operations and development. We have sufficient funds to conduct our operations for approximately nine months. Our financing through a private placement offering since our year end is discussed below. There can be no assurance that financing will be available in amounts or on terms acceptable to us, if at all.

By adjusting our operations and development to the level of capitalization, we believe we have sufficient capital resources to meet projected cash flow deficits. However, if during that period or thereafter, we are not successful in generating sufficient liquidity from operations or in raising sufficient capital resources, on terms acceptable to us, this could have a material adverse effect on our business, results of operations liquidity and financial condition.

Our registered independent certified public accountants have stated in their report dated December 15, 2008, that we have incurred operating losses in the last two years, and that we are dependent upon management's ability to develop profitable operations and raise additional capital. These factors among others may raise substantial doubt about our ability to continue as a going concern.

Recent Debt and Equity Financing Transactions

Fiscal 2007

During the year ended September 30, 2007, we issued and sold an aggregate principal amount of $850,000 in secured convertible promissory notes bearing interest at 10% per annum and warrants to purchase an aggregate of 1,700,000 shares of our common stock to James A. Hayward, our President, Chairman, Chief Executive Officer and a director.

On April 23, 2007, we issued and sold to James A. Hayward a $100,000 principal amount secured promissory note (“April Note”) bearing interest at a rate of 10% per annum and a warrant (“April Warrant”) to purchase 200,000 shares of our common stock. On June 30, 2007, we issued and sold to James A. Hayward a $250,000 principal amount secured promissory note (“June Note”) bearing interest at a rate of 10% per annum and a warrant (“June Warrant”) to purchase 500,000 shares of our common stock. On July 30, 2007, we issued and sold to James A. Hayward a $200,000 principal amount secured promissory note (“July Note”) bearing interest at a rate of 10% per annum and a warrant (“July Warrant”) to purchase 400,000 shares of our common stock. On September 28, 2007, we issued and sold to James A. Hayward a $300,000 principal amount secured promissory note (“September Note”) bearing interest at a rate of 10% per annum and a warrant (“September Warrant”) to purchase 600,000 shares of our common stock.

The April Note and accrued but unpaid interest thereon converted on April 22, 2008 at a conversion price of $0.15 into 733,334 shares of our common stock. The April Warrant is exercisable for a four-year period commencing on April 23, 2008, and expiring on April 22, 2012, at a price of $0.50 per share. The April Warrant may be redeemed at our option at a redemption price of $0.01 upon the earlier of (i) April 22, 2010, and (ii) the date our common stock is quoted on The Over the Counter Bulletin Board at or above $1.00 per share for 20 consecutive trading days.

The June Note and accrued but unpaid interest thereon converted on June 30, 2008 at a conversion price of $0.087732076 per share, which is equal to a 20% discount to the average volume, weighted average price of our common stock for the ten trading days prior to issuance into 3,134,543 shares of our common stock. The June Warrant is exercisable for a four-year period commencing on June 30, 2008, and expiring on June 29, 2012, at a price of $0.50 per share. The June Warrant may be redeemed at our option at a redemption price of $0.01 upon the earlier of (i) June 29, 2010, and (ii) the date our common stock has traded on The Over the Counter Bulletin Board at or above $1.00 per

share for 20 consecutive trading days.

The July Note and accrued but unpaid interest thereon converted on July 30, 2008 at a conversion price of $0.102568072 per share, which is equal to a 20% discount to the average volume, weighted average price of our common stock for the ten trading days prior to issuance, into 2,144,917 shares of our common stock. The July Warrant is exercisable for a four-year period commencing on July 30, 2008, and expiring on July 29, 2012, at a price of $0.50 per share. The July Warrant may be redeemed at our option at a redemption price of $0.01 upon the earlier of (i) July 29, 2010, and (ii) the date our common stock has traded on The Over the Counter Bulletin Board at or above $1.00 per share for 20 consecutive trading days.

The September Note and accrued but unpaid interest thereon converted on September 28, 2008 at a conversion price of $0.066429851 per share, which is equal to a 30% discount to the average volume, weighted average price of our common stock for the ten trading days prior to issuance, into 4,967,646 shares of our common stock. The September Warrant is exercisable for a four-year period commencing on July 30, 2008, and expiring on September 27, 2012, at a price of $0.50 per share. The September Warrant may be redeemed at our option at a redemption price of $0.01 upon the earlier of (i) September 27, 2010, and (ii) the date our common stock has traded on The Over the Counter Bulletin Board at or above $1.00 per share for 20 consecutive trading days.

In addition, on June 27, 2007, we completed a private placement offering of convertible debt and associated warrants in which we issued and sold to certain investors an aggregate of 3 units of our securities, each unit consisting of (i) a $50,000 Principal Amount of 10% Secured Convertible Promissory Note and (ii) warrants to purchase 100,000 shares of our common stock. The notes and accrued but unpaid interest thereon converted at $0.15 per share on June 27, 2008 into an aggregate of 1,100,000 shares of our common stock. The warrants are exercisable for a four year period commencing on June 27, 2008, and expiring on June 26, 2012, at a price of $0.50 per share. On August 8, 2007, we issued and sold a $100,000 principal amount secured promissory note bearing interest at a rate of 10% per annum and a warrant to purchase 200,000 shares of our common stock to an “accredited investor,” as defined in regulations promulgated under the Securities Act. The promissory note and accrued but unpaid interest thereon converted on August 8, 2008 at a conversion price of $0.096274883 per share, which is equal to a 20% discount to the average volume, weighted average price of our common stock for the ten trading days prior to issuance, into 1,142,562 shares of our common stock. The warrant is exercisable for a four-year period commencing on August 8, 2008, and expiring on August 7, 2012, at a price of $0.50 per share.

Fiscal 2008

During the year ended September 30, 2008, we sold an aggregate of thirty-six units at a price of $100,000 per unit for sale to “accredited investors,” as defined in regulations promulgated under the Securities Act, for aggregate gross proceeds of $3,600,000. Each unit consists of (i) a $100,000 Principal Amount 10% Secured Convertible Promissory Note and (ii) a warrant to purchase 200,000 shares of our common stock. The promissory notes and accrued but unpaid interest thereon automatically convert one year after issuance at a conversion price equal to a discount to the average volume, weighted average price of our common stock for the ten trading days prior to issuance, and are convertible into shares of our common stock at the option of the holder at any time prior to such automatic conversion at a price equal to the greater of (i) 50% of the average price of our common stock for the ten trading days prior to the date of the notice of conversion and (ii) the automatic conversion price. In addition, any time prior to conversion, we have the irrevocable right to repay the unpaid principal and accrued but unpaid interest under the notes on three days notice. The promissory notes bear interest at the rate of 10% per annum and are due and payable in full on the one year anniversary of their issuance. The warrants are exercisable for cash or on a cashless basis for a period of four years commencing one year after issuance at a price of $0.50 per share. Each warrant may be redeemed at our option at a redemption price of $0.01 upon the earlier of (i) three years after the issuance, and (ii) the date our common stock has traded on The Over the Counter Bulletin Board at or above $1.00 per share for 20 consecutive trading days.

Fiscal 2009

On October 21, 2008, we issued and sold to James A. Hayward a $500,000 principal amount secured promissory note (“October Note”) bearing interest at a rate of 10% per annum and a warrant (“October Warrant”) to purchase 1,000,000 shares of our common stock. The October Note and accrued but unpaid interest thereon is convertible into shares of our common stock at a price of $0.50 per share by the holder at any time from October 21, 2008, through October 20, 2009, and shall automatically convert on October 21, 2009 at a conversion price of $0.026171520 per share, which is equal to a 30% discount to the average volume, weighted average price of our common stock for the ten trading days prior to issuance. At any time prior to conversion, we have the right to prepay the October Note and accrued but unpaid interest thereon upon 3 days prior written notice (during which period the holder can elect to convert the note).

The October Warrant is exercisable for a four-year period commencing on October 21, 2009, and expiring on October 20, 2013, at a price of $0.50 per share. The October Warrant may be redeemed at our option at a redemption price of $0.01 upon the earlier of (i) October 20, 2011, and (ii) the date our common stock has traded on The Over the Counter Bulletin Board at or above $1.00 per share for 20 consecutive trading days.

We presently do not have any available credit, bank financing or other external sources of liquidity. Due to our brief history and historical operating losses, our operations have not been a source of liquidity. We will need to obtain additional capital in order to expand operations and become profitable. We intend to pursue the building of a re-seller network outside the United States, and if successful, the re-seller agreements would constitute a source of liquidity and capital over time. In order to obtain capital, we may need to sell additional shares of our common stock or borrow funds from private lenders. There can be no assurance that we will be successful in obtaining additional funding and execution of re-seller agreements outside the Unites States.

We believe we may be required to seek additional capital to sustain or expand our prototype and sample manufacturing, and sales and marketing activities, and to otherwise continue our business operations beyond that date. We have no commitments for any future funding, and may not be able to obtain additional financing or grants on terms acceptable to us, if at all, in the future. If we are unable to obtain additional capital this would restrict our ability to grow and may require us to curtail or discontinue our business operations. Additionally, while a reduction in our business operations may prolong our ability to operate, that reduction would harm our ability to implement our business strategy. If we can obtain any equity financing, it may involve substantial dilution to our then existing shareholders.

Additional investments are being sought, but we cannot guarantee that we will be able to obtain such investments. Financing transactions may include the issuance of equity or debt securities, obtaining credit facilities, or other financing mechanisms. However, the trading price of our common stock and the downturn in the U.S. stock and debt markets could make it more difficult to obtain financing through the issuance of equity or debt securities. Even if we are able to raise the funds required, it is possible that we could incur unexpected costs and expenses, fail to collect significant amounts owed to us, or experience unexpected cash requirements that would force us to seek alternative financing. Further, if we issue additional equity or debt securities, stockholders may experience additional dilution or the new equity securities may have rights, preferences or privileges senior to those of existing holders of our common stock. If additional financing is not available or is not available on acceptable terms, we will have to curtail our operations.

Substantially all of the real property used in our business is leased under operating lease agreements.

Product Research and Development

We anticipate spending approximately $150,000 for product research and development activities during the next twelve months.

Acquisition of Plant and Equipment and Other Assets

We do not anticipate the sale of any material property, plant or equipment during the next 12 months. We do anticipate spending approximately $30,000 on the acquisition of leasehold improvements during the next 12 months. We believe our current leased space is adequate to manage our growth, if any, over the next 2 to 3 years.

Number of Employees

We currently have 13 full-time employees and two part-time employees, including two in management, nine in operations, three in sales and marketing and one in investor relations. The company expects to increase its staffing dedicated to sales, product prototyping, manufacturing of DNA markers and forensic authentication services. Expenses related to travel, marketing, salaries, and general overhead will be increased as necessary to support our growth in revenue. In order for us to attract and retain quality personnel, we anticipate we will have to offer competitive salaries to future employees. We anticipate that it may become desirable to add additional full and or part time employees to discharge certain critical functions during the next 12 months. This projected increase in personnel is dependent upon our ability to generate revenues and obtain sources of financing. There is no guarantee that we will be successful in raising the funds required or generating revenues sufficient to fund the projected increase in the number of employees. As we continue to expand, we will incur additional costs for personnel.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Inflation

The effect of inflation on the Company's revenue and operating results was not significant.

Going Concern

The financial statements included in this filing have been prepared in conformity with generally accepted accounting principles that contemplate our continuance as a going concern. Our auditors, in their report dated December 15, 2008, have expressed substantial doubt about our ability to continue as going concern. Our cash position may be inadequate to pay all of the costs associated with the testing, production and marketing of our products. Management intends to use borrowings and the sale of equity or convertible debt to mitigate the effects of its cash position, however no assurance can be given that debt or equity financing, if and when required will be available. The financial statements do not include any adjustments relating to the recoverability and classification of recorded assets and classification of liabilities that might be necessary should we be unable to continue existence.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

The Company is a smaller reporting company as defined by Rule 12b-2 under the Exchange Act and is not required to provide the information required under this item.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

See pages F-1 through F-34 following the Exhibits List.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES.

Not applicable.

ITEM 9A(T). CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures, as defined in Rule 13a-15(e) promulgated under the Exchange Act that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of September 30, 2008. Based on the evaluation of these disclosure controls and procedures, and in light of the material weaknesses found in our internal controls, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective.

Management Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision of our Chief Executive Officer, the Company conducted an evaluation of the effectiveness of our internal control over financial reporting as of September 30, 2008 using the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. In its assessment of the effectiveness of internal control over financial reporting as of September 30, 2008, we determined that control deficiencies existed that constituted material weaknesses, as described below:

- lack of documented policies and procedures;
- we have no audit committee;

- there is a risk of management override given that our officers have a high degree of involvement in our day to day operations.
- there is no policy on fraud and no code of ethics at this time, though we plan to implement such policies in fiscal 2009; and
- there is no effective separation of duties, which includes monitoring controls, between the members of management.

Management is currently evaluating what steps can be taken in order to address these material weaknesses.

Accordingly, we concluded that these control deficiencies resulted in a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis by the company's internal controls.

As a result of the material weaknesses described above, management has concluded that the Company did not maintain effective internal control over financial reporting as of September 30, 2008 based on criteria established in Internal Control—Integrated Framework issued by COSO.

RBSM LLP, an independent registered public accounting firm, was not required to and has not issued a report concerning the effectiveness of our internal control over financial reporting as of September 30, 2008.

Changes in Internal Controls

During the fiscal quarter ended September 30, 2008, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The following is a list of our directors, executive officers and significant employees.

Name	Age	Title	Board of Directors
James A. Hayward	55	Chief Executive Officer, President, and Chairman of the Board	Director
Sanford R. Simon	65		Director
Yacov Shamash	58		Director
Kurt Jensen	51	Chief Financial Officer	
Ming-Hwa Benjamin Liang	45	Secretary and Strategic Technology Development Officer	

Directors are elected to serve until the next annual meeting of stockholders and until their successors are elected and qualified. Currently there are three seats on our board of directors.

Currently, the members of our board of directors do not receive any fees for being a director or attending meetings. Our directors are reimbursed for out-of-pocket expenses relating to attendance at meetings. Officers are elected by the Board of Directors and serve until their successors are appointed by the Board of Directors. Biographical resumes of each officer and director are set forth below.

Chief Executive Officer – James A. Hayward

Dr. James A. Hayward has been our Chief Executive Officer since March 17, 2006 and our President and the Chairman of the Board of Directors since June 12, 2007. He was previously our acting Chief Executive Officer since

October 5, 2005. Since June 2004, Dr. Hayward has been the Chairman of Evotope Biosciences, Inc., a drug development company based in Stony Brook, New York. Since 2001, Dr. Hayward has been a director of Q-RNA, Inc., a biotech company based in New York, New York. Since 2000, Dr. Hayward has been a General Partner of Double D Venture Fund, a venture capital firm based in New York, New York. Between 1990 and July 2004, Dr. Hayward was the Chairman, President and CEO of The Collaborative Group, Ltd., a provider of products and services to the biotechnology, pharmaceutical and consumer-product industries based in Stony Brook, New York. Dr. Hayward received his bachelor's degree in Biology and Chemistry from the State University of New York at Oneonta in 1976, his Ph.D. in Molecular Biology from the State University of New York at Stony Brook in 1983, and an honorary Doctor of Science from Stony Brook in 2000. Dr. Hayward has served on the boards of the Council on Biotechnology, the Long Island Association, the Stony Brook Foundation, The Research Foundation of State University of New York Board of Directors, the New York Biotechnology Association, the Long Island Life Sciences Initiative and the Ward Melville Heritage Organization.

Director – Yacov Shamash

Dr. Yacov Shamash has been a member of the Board of Directors since March 17, 2006. Dr. Shamash is Vice President of Economic Development at the State University of New York at Stony Brook. Since 1992, he has been the Dean of Engineering and Applied Sciences and the Harriman School for Management and Policy at the University, and Founder of the New York State Center for Excellence in Wireless Technologies at the University. Dr. Shamash developed and directed the NSF Industry/University Cooperative Research Center for the Design of Analog/Digital Integrated Circuits from 1989 to 1992 and also served as Chairman of the Electrical and Computer Engineering Department at Washington State University from 1985 until 1992. Dr. Shamash also serves on the Board of Directors of Keytronic Corp., Netsmart Technologies, Inc., American Medical Alert Corp., and Softheon Corp.

Director – Sanford R. Simon

Dr. Sanford R. Simon has been a member of the Board of Directors since March 17, 2006. Dr. Simon has been a Professor of Biochemistry, Cell Biology and Pathology at Stony Brook since 1997. He joined the faculty at Stony Brook as an Assistant Professor in 1969 and was promoted to Associate Professor with tenure in 1975. Dr. Simon was a member of the Board of Directors of The Collaborative Group from 1995 to 2004. From 1967 to 1969 Dr. Simon was a Guest Investigator at Rockefeller University. Dr. Simon received a B.A. in Zoology and Chemistry from Columbia University in 1963, a Ph.D. in Biochemistry from Rockefeller University in 1967, and studied as a postdoctoral fellow with Nobel Prize winner Max Perutz in Cambridge, England.

Chief Financial Officer – Kurt Jensen

Kurt H. Jensen, M.Sc.(Cand. Merc.) has been our Chief Financial Officer since December 21, 2007, taking over the position from Dr. Hayward. Mr. Jensen has been our Controller since February 2006. Prior to that date, for a period of more than 23 years, he was employed by Point of Woods Homes, Inc. Mr. Jensen was awarded a M.Sc. in Economics and Business Administration from the Copenhagen Business School in 1983.

Secretary and Strategic Technology Development Officer – Ming-Hwa Benjamin Liang

Ming-Hwa Benjamin Liang has been our Secretary and Strategic Technology Development Officer since October 2005. Between May 1999 and September 2005, Mr. Liang had been the director of research and development at Biowell Technology Inc. Mr. Liang received a B.S. in Bio-Agriculture from Colorado State University in 1989, a M.S. in Horticulture from the University of Missouri at Columbia in 1991, his Ph.D. in Plant Science from the University of Missouri at Columbia in 1997 and his LL.M. in Intellectual Property Law from Shih Hsin University, Taiwan in 2004.

BOARD MEETINGS AND COMMITTEES

During the year ended September 30, 2008, the Board of Directors held five board meetings to conduct business. The Board also approved certain actions by unanimous written consent.

Compensation Committee

In June 2008, our Board of Directors created a standing compensation committee. Our compensation committee is composed of our independent directors, Dr. Sanford R. Simon and Dr. Yacov Shamash. The compensation committee reviews and approves salaries and bonuses for all officers, administers options outstanding under our stock incentive plan, provides advice and recommendations to the Board regarding directors' compensation and carries out the responsibilities required by SEC rules. The compensation committee believes that its processes and oversight should be directed toward attracting, retaining and motivating employees and non-employee directors to promote and

advance the interests and strategic goals of the Company. As requested by the compensation committee, the Chief Executive Officer will provide information and may participate in discussion regarding compensation for other executive officers. The compensation committee does not utilize outside compensation consultants but considers other general industry information and trends if available. The Board of Directors has not adopted a written charter for the compensation committee.

Nominating and Audit Committees

We do not have a standing nominating or audit committee. As a small public company, we believe that all of our directors acting together, as opposed to a subset of them acting by means of a committee, is the most efficient and effective framework for us to perform the functions otherwise associated with nominating and audit committees.

Nominating Committee Functions

Since we do not have a nominating committee, all of the members of the Board of Directors participate in the consideration of director nominees. We do not currently have a written nominating committee charter or similar document.

Audit Committee Functions

Since we do not have an audit committee, the entire Board of Directors acts as the audit committee. The Board has determined that we do not have an audit committee financial expert, as that term is defined in Item 407(d)(5)(ii) of Regulation S-K, serving on the Board of Directors. We have not been able to identify a suitable candidate for our Board of Directors that would qualify as an audit committee financial expert. Dr. Hayward does not meet the definition of an "independent" director set forth in Rule 4200(a)(15) of the Market Place Rules of the Nasdaq Stock Market, which is the independence standard that we have chosen to report under. We do not currently have a written audit committee charter or similar document.

Compliance with Section 16(A) of the Exchange Act

Since we are governed under Section 15(d) of the Exchange Act, we are not required to file reports of executive officers and directors and persons who own more than 10% of a registered class of the Company's equity securities pursuant to Section 16(a) of the Exchange Act.

Code of Ethics

We have not yet adopted a Code of Ethics. Our Board of Directors periodically reviews whether it should adopt a Code of Ethics given the scale and character of its operations at this time.

ITEM 11. EXECUTIVE COMPENSATION.

Overview

We currently have three named executive officers, Dr. James A. Hayward, a director, our Chief Executive Officer, President and Chairman of the Board of Directors, Mr. Kurt H. Jensen, who was appointed our Chief Financial Officer on December 21, 2007, and Dr. Ming-Hwa Ben Liang, our Chief Technology Officer and Secretary.

Our Board of Directors has not adopted or established a formal policy or procedure for determining the amount of compensation paid to our executive officers. No pre-established, objective performance goals or metrics have been used by the Board of Directors in determining the compensation of our executive officers. Dr. Hayward is involved in the Board's deliberations regarding executive compensation and provides recommendations with respect to his and the compensation of Mr. Jensen and Dr. Liang based on, among other things, our financial and operating performance and prospects and the contributions made by Mr. Jensen and Dr. Liang to the success of the Company.

Summary Compensation Table

The following table sets forth the compensation of our principal executive officer and our two other executive officers for the two fiscal years ended September 30, 2008. We refer to these executive officers as our "named executive officers."

Name and Principal	Year (b)	Salary ($)(2)	Bonus ($)	Stock Awards	Option Awards	Non-Equity	Non-qualified Deferred	All Other	Total ($)

Position (a)(1)		(c)	(d)	($) (e)	($)(3) (f)	Incentive Plan Compensation ($) (g)	Compensation Earnings ($) (h)	Compensation ($) (i)	(j)
James A. Hayward Chairman, President and Chief Executive Officer	2008	—	—	—	1,666,000	—	—	—	1,666,000
	2007	—	—	—	—	—	—	—	—
Kurt H. Jensen Chief Financial Officer	2008	135,871	—	—	490,000	—	—	—	625,871
	2007	108,077	—	—	—	—	—	—	108,077
Ming-Hwa Liang Chief Technology Officer and Secretary	2008	123,382	—	—	686,000	—	—	—	809,382
	2007	103,027	—	—	—	—	—	—	103,027

(1) We have no employment agreements with our named executive officers.

(2) Dr. Hayward has elected not to receive cash compensation until there is an improvement in the Company's financial and operating performance and prospects.

(3) The amounts in column (f) represent the grant date fair value under SFAS 123R based on the average of the bid and asked prices of our common stock on the grant date. The grant date for the stock options was June 17, 2008, and the average of the bid and asked prices of our common stock was $0.11. The grant date fair value for the stock options was $0.098. The options granted to the named executive officers vested with respect to 25% of the underlying shares on the date of grant, and the remaining will vest ratably each anniversary thereafter until fully vested on the third anniversary of the date of grant. The exercise of the stock options by the named executive officers is subject to stockholder approval of the share increase amendment by the Company's stockholders at the 2008 annual meeting of stockholders.

Outstanding Equity Awards at Fiscal Year-End

The following table shows information concerning outstanding equity awards as of September 30, 2008 held by the Named Executive Officers.

	Option Awards					Stock Awards			
Name	Number of Securities Underlying Unexercised Options (#) Exercisable (1)	Number of Securities Underlying Unexercised Options (#) Unexercisable (1)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($) (1)	Option Expiration Date (1)	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
James A. Hayward	0	17,000,000		$ 0.11	6/17/2013	—		—	—	—
Kurt H. Jensen	500,000	0		$ 0.09	9/01/2011	—		—	—	—
	0	5,000,000		$ 0.11	6/17/2013	—		—	—	—
Ming-Hwa Liang	0	7,000,000		$ 0.11	6/17/2013	—		—	—	—

(1) On June 17, 2008, the Board of Directors of the Company granted nonstatutory stock options under the 2005 Incentive Stock Plan to certain key employees, including our named executive officers. The options granted to the named executive officers vested with respect to 25% of the underlying shares on the date of grant, and the remaining will vest ratably each anniversary thereafter until fully vested on the third anniversary of the date of grant. The exercise of the stock options by the named executive officers is subject to stockholder approval of the share increase

amendment by the Company's stockholders at the 2008 annual meeting of stockholders.

Pension Benefits

None of our named executive officers participates in or has account balances in qualified or non-qualified defined benefit plans sponsored by us.

Nonqualified Contribution Plans

None of our named executive officers participate in or have account balances in non-qualified defined contribution plans maintained by us.

Deferred Compensation

None of our named executive officers participates in or has account balances in deferred compensation plans or arrangements maintained by us.

Employment Agreements

We have no employment agreements with our named executive officers.

Payment of Post-Termination Compensation

We do not have change-in-control agreements with any of our executive officers, and we are not obligated to pay severance or other enhanced benefits to executive officers upon termination of their employment.

Director Compensation Table for Fiscal 2008

We currently have no policy in effect for providing compensation to our directors for their services on our Board of Directors. During the year ended September 30, 2008, we did not provide any cash compensation to our directors for their service on our Board of Directors.

The following table sets forth summary information concerning compensation paid or accrued to the members of our Board of Directors (other than Dr. Hayward, our Chief Executive Officer, who is a named executive officer) for services rendered to us in all capacities for the fiscal year ended September 30, 2008.

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)(1)	All Other Compensation ($)	Total ($)
Yacov Shamash	$ —	$ —	$ 49,000	$ —	$ 49,000
Sanford R. Simon	$ —	$ —	$ 49,000	$ —	$ 49,000

(1) The amount reported in column (l) represents the grant date fair value under SFAS 123R based on the average of the bid and asked prices of our common stock on the grant date. The grant date for the stock options was June 17, 2008, and the average of the bid and asked prices of our common stock was $0.11. The grant date fair value for the stock options was $0.098.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The following table sets forth certain information regarding the shares of our common stock beneficially owned as of December 15, 2008, (i) by each of the executive officers named in the table under “Executive Compensation” and each of our directors, and (ii) by all officers and directors as a group

NAME AND ADDRESS OF BENEFICIAL OWNER	TITLE OF CLASS	NUMBER OF SHARES OWNED (1)(2)	PERCENTAGE OF CLASS (3)
James A. Hayward 25 Health Sciences Drive, Suite 113 Stony Brook, New York 11790	Common Stock	20,439,840 (4)	8.48%
Yacov Shamash 25 Health Sciences Drive, Suite 113 Stony Brook, New York 11790	Common Stock	250,000 (5)	*
Kurt Jensen 25 Health Sciences Drive, Suite 113 Stony Brook, New York 11790	Common Stock	580,000 (6)	*
Ben Liang	Common Stock	373,650 (7)	*

25 Health Sciences Drive, Suite 113 Stony Brook, New York 11790			
Sanford R. Simon 25 Health Sciences Drive, Suite 113 Stony Brook, New York 11790	Common Stock	250,000 (5)	*
All directors and officers as a group (5 persons)	Common Stock	21,893,490 (8)	9.04%

* indicates less than one percent

(1) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to the shares shown. Except as indicated by footnote and subject to community property laws where applicable, to our knowledge, the stockholders named in the table have sole voting and investment power with respect to all common stock shares shown as beneficially owned by them. A person is deemed to be the beneficial owner of securities that can be acquired by such person within 60 days upon the exercise of options, warrants or convertible securities (in any case, the "Currently Exercisable Options"). Each beneficial owner's percentage ownership is determined by assuming that the Currently Exercisable Options that are held by such person (but not those held by any other person) have been exercised and converted.

(2) Does not include shares subject to options granted on June 17, 2008 pursuant to the 2005 Incentive Stock Plan, which vested with respect to 25% of the underlying shares on the date of grant and will vest with respect to the remaining shares ratably on each anniversary thereafter until fully vested on the third anniversary of the date of grant, including 17,000,000 to James A. Hayward, 500,000 to Yacov Shamash, 5,000,000 to Kurt H. Jensen, 7,000,000 to Ben Liang and 500,000 to Sanford R. Simon. The exercise of the stock options is subject to approval by our stockholders at the 2008 annual meeting of stockholders of an amendment to the 2005 Incentive Stock Plan that will increase the total number of shares of common stock issuable thereunder and limit the number of shares that can be covered by awards made to any participant in any calendar year.
(3) Based upon 231,870,731 shares of common stock outstanding as of December 15, 2008.
(4) Includes 9,200,000 shares underlying currently exercisable warrants.
(5) Includes 250,000 shares underlying a currently exercisable warrant.
(6) Includes 40,000 shares held by a spouse and 500,000 immediately exercisable options.
(7) Includes 275,392 shares held by spouse.
(8) Includes 10,200,000 shares underlying currently exercisable options and warrants.

Equity Compensation Plan Information

2002 Professional/Employee/Consultant Compensation Plan.

In November of 2002, we created a special compensation plan to pay the founders, consultants and professionals that had been contributing valuable services to us during the previous nine months. This plan, under which 2,000,000 shares of our common stock were reserved for issuance, is called the Professional/Employee/Consultant Compensation Plan (the “Compensation Plan”). Share and option issuances from the Compensation Plan were to be staggered over the following six to eight months, and consultants that were to continue providing services thereafter either became employees or received renewed contracts from us in July of 2003, which contracts contained a more traditional cash compensation component. Each qualified and eligible recipient of shares and/or options under the Compensation Plan received securities in lieu of cash payment for services. Each recipient agreed, in his or her respective consulting contract with us, to sell a limited number of shares monthly. In December of 2004, we adjusted the exercise price of options under the Compensation Plan to $0.60 per share. As of September 30, 2007, a total of 1,440,000 shares have been issued from, and options to purchase 560,000 shares have been issued under the Compensation Plan, and options to purchase 264,000 shares have been exercised as of that date.

2005 Incentive Stock Plan.

On January 26, 2005, the Board of Directors, and on February 15, 2005, the holders of a majority of the outstanding common stock of the Company approved the 2005 Incentive Stock Plan and authorized the issuance of 16,000,000 shares of common stock as stock awards and stock options thereunder. On May 16, 2007, at the annual meeting of stockholders, the holders of a majority of the outstanding common stock of the Company approved an increase in the number of shares subject to the 2005 Incentive Stock Plan to 20,000,000 shares of common stock. On June 17, 2008, the Board of Directors unanimously adopted an amendment to the 2005 Incentive Stock Plan that will increase the total number of shares of common stock issuable pursuant to the 2005 Incentive Stock Plan from a total of 20,000,000 shares to a total of 100,000,000 shares, which is subject to approval by our stockholders at the 2008 annual meeting of stockholders.

The 2005 Incentive Stock Plan is designed to retain directors, executives, and selected employees and consultants by rewarding them for making contributions to our success with an award of shares of our common stock. As of November 10, 2008, a total of 8,550,000 shares have been issued and options to purchase 42,410,000 shares have been granted under the 2005 Incentive Stock Plan.

The Board of Directors, in their discretion, may award stock and stock options to executive officers and key employees as part of their compensation for employment or for retention purposes.

The following table sets forth certain information regarding our compensation plans as of September 30, 2008:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
	(a)	(b)	(c)
Professional/Consultant/ Employee Stock and Stock Option Compensation Plan approved in November 2002	296,000	$ 0.60	0
2005 Incentive Stock Plan approved on January 26, 2005	42,410,000	$ 0.16	5,790,000
Total	42,706,000	$ 0.59	5,790,000

Amendment to the 2005 Incentive Stock Plan and Recent Equity Award Grants. On June 17, 2008, the Board of Directors adopted an amendment to the 2005 Incentive Stock Plan that will increase the total number of shares of common stock issuable pursuant to the 2005 Incentive Stock Plan from a total of 20,000,000 shares to a total of 100,000,000 shares, which is subject to approval by our stockholders at the 2008 annual meeting of stockholders. In connection with the share increase amendment, the Board of Directors granted options to purchase a total of 37,750,000 shares to certain key employees and non-employee directors under the 2005 Incentive Stock Plan, including 17,000,000, 5,000,000 and 7,000,000 to James A. Hayward, Kurt H. Jensen and Ming-Hwa Liang, respectively. The options granted to our key employees and non-employee directors vested with respect to 25% of the underlying shares on the date of grant and the remaining will vest ratably each anniversary thereafter until fully vested on the third anniversary of the date of grant.

The effectiveness of the share increase amendment and the exercise of these stock options by the key employees and non-employee directors are subject to approval by our stockholders at the 2008 annual meeting of stockholders.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

On October 21, 2008, we issued and sold to James A. Hayward a $500,000 principal amount secured promissory note (“October Note”) bearing interest at a rate of 10% per annum and a warrant (“October Warrant”) to purchase 1,000,000 shares of our common stock. The October Note and accrued but unpaid interest thereon is convertible into shares of our common stock at a price of $0.50 per share by the holder at any time from October 21, 2008, through October 20, 2009, and shall automatically convert on October 21, 2009 at a conversion price of $0.026171520 per share, which is equal to a 30% discount to the average volume, weighted average price of our common stock for the ten trading days prior to issuance. At any time prior to conversion, we have the right to prepay the October Note and accrued but unpaid interest thereon upon 3 days prior written notice (during which period the holder can elect to convert the note). The October Warrant is exercisable for a four-year period commencing on October 21, 2009, and expiring on October 20, 2013, at a price of $0.50 per share. The October Warrant may be redeemed at our option at a redemption price of $0.01 upon the earlier of (i) October 20, 2011, and (ii) the date our common stock has traded on The Over the Counter Bulletin Board at or above $1.00 per share for 20 consecutive trading days.

Until the principal and interest under the October Note is paid in full, or converted into our common stock, the October Note will be secured by a security interest in all of our assets.

We have no policy regarding entering into transactions with affiliated parties.

Director Independence

Although our securities are not currently listed on a national securities exchange or in an inter-dealer quotation system, which would subject us to the listing standards pertaining to director independence, the Board of Directors has determined that currently and at all times during the year ended September 30, 2008, Drs. Shamash and Simon, representing two of our three directors, are "independent" as defined by the listing standards of the Nasdaq Stock Market, constituting a majority of independent directors of our Board of Directors as required by the rules of the Nasdaq Stock Market. The Board of Directors considers in its evaluation of independence whether any director has a relationship with us that could interfere with the exercise of independent judgment in carrying out his responsibilities of a director.

The information set forth under "Item 18. Directors, Executive Officers and Corporate Governance–Board Meetings and Committees" is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The following table sets forth fees billed to us by our auditors during the fiscal years ended September 30, 2008 and 2007 for: (i) services rendered for the audit of our annual financial statements and the review of our quarterly financial statements, (ii) services by our auditor that are reasonably related to the performance of the audit or review of our financial statements and that are not reported as Audit Fees, (iii) services rendered in connection with tax compliance, tax advice and tax planning, and (iv) all other fees for services rendered.

	September 30, 2008	September 30, 2007
(i) Audit Fees	$ 157,516	$ 66,921
(ii) Audit Related Fees		
(iii) Tax Fees		-
(iv) All Other Fees		-
Total Fees	$ 157,516	$ 66,921

Audit Fees

Consists of fees billed for professional services rendered for the audit of the Company's consolidated financial statements and review of the interim consolidated financial statements included in quarterly reports and services that are normally provided by RBSM LLP in connection with statutory and regulatory filings or engagements.

Audit Related Fees

Consists of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements and are not reported under "Audit Fees." These services consist of responding to SEC comments and the review of and consent to registration statements.

Tax Fees

Consists of fees billed for professional services for tax compliance, tax advice and tax planning.

All Other Fees

Consists of fees for products and services other than the services reported above. There were no management consulting services provided in fiscal 2008 or 2007.

The Board of Directors has considered whether the provision of non-audit services is compatible with maintaining the principal accountant's independence.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Auditors

We currently do not have a designated Audit Committee, and accordingly, the policy of our Board of Directors is to pre-approve all audit and permissible non-audit services provided by the independent auditors. These services may include audit services, audit-related services, tax services and other services. Pre-approval is generally provided for up to one year and any pre-approval is detailed as to the particular service or category of services and is generally subject to a specific budget. The independent auditors and management are required to periodically report to our Board of Directors regarding the extent of services provided by the independent auditors in accordance with this pre-approval, and the fees for the services performed to date. Our Board of Directors may also pre-approve particular services on a case-by-case basis.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) We have filed the following documents as part of this Form 10-K:

1. Consolidated Financial Statements

Our consolidated financial statements at September 30, 2008 and 2007, and for the years ended September 30, 2008 and 2007, and the notes thereto, together with the report of our independent registered public accounting firm on those consolidated financial statements, are hereby filed as part of this report beginning on page F-1.

2. Financial Statement Schedule

All financial statement schedules have been omitted since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto.

3. Exhibits.

The information required by this item is set forth on the exhibit index that follows the signature page of this report.

SIGNATURES.

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

APPLIED DNA SCIENCES, INC.

Date: December 16, 2008

/s/JAMES A. HAYWARD
James A. Hayward
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Position	Date
/s/ JAMES A. HAYWARD James A. Hayward	Chief Executive Officer (Principal Executive Officer), President, Chairman of the Board of Directors and Director	December 16, 2008
/s/ KURT H. JENSEN Kurt H. Jensen	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	December 16, 2008
/s/ YACOV SHAMASH Yacov Shamash	Director	December 16, 2008
/s/ SANFORD R. SIMON Sanford R. Simon	Director	December 16, 2008

EXHIBIT INDEX

Exhibit	Description
2.1	Articles of Merger of Foreign and Domestic Corporations, filed December 19, 1998 with the Nevada Secretary of State, filed as an exhibit to the annual report on Form 10-KSB filed with the Commission on December 29, 2003 and incorporated herein by reference.
3.1	Articles of Incorporation of DCC Acquisition Corporation, filed April 20, 1998 with the Nevada Secretary of State, filed as an exhibit to the annual report on Form 10-KSB filed with the Commission on December 29, 2003 and incorporated herein by reference.
3.2	Articles of Amendment of Articles of Incorporation of DCC Acquisition Corp. changing corporation name to ProHealth Medical Technologies, Inc.
3.3	Certificate of Designations, Powers, preferences and Rights of the Founders' Series of Convertible Preferred Stock, filed as an exhibit to the annual report on Form 10-KSB filed with the Commission on December 29, 2003 and incorporated herein by reference.
3.4	Articles of Amendment of Articles of Incorporation of Applied DNA Sciences, Inc. increasing the par value of the company's common stock, filed on December 3, 2003 with the Nevada Secretary of State, filed as an exhibit to the annual report on Form 10-KSB filed with the Commission on December 29, 2003 and incorporated herein by reference.
3.5	Articles of Amendment of Articles of Incorporation of Applied DNA Sciences, Inc. increasing the number of authorized shares of the company's common stock, filed on March 3, 2005 with the Nevada Secretary of State, filed as an exhibit to the registration statement on Form SB-2 on Form S-1 filed with the Commission on April 21, 2008 and incorporated herein by reference.
3.6	Articles of Amendment of Articles of Incorporation of Applied DNA Sciences, Inc. increasing the number of authorized shares of the company's common stock, filed on May 17, 2007 with the Nevada Secretary of State, filed as an exhibit to the quarterly report on Form 10-QSB filed with the Commission on February 15, 2007 and incorporated herein by reference.
3.7	By-Laws of Applied DNA Sciences, Inc., filed as an exhibit to the annual report on Form 10-KSB filed with the Commission on December 29, 2003 and incorporated herein by reference.
4.1	Form of Subscription Agreement, filed as an exhibit to the current report on Form 8-K filed with the Commission on January 28, 2005 and incorporated herein by reference.
4.2	Form of 10% Secured Convertible Promissory Note, filed as an exhibit to the current report on Form 8-K filed with the Commission on January 28, 2005 and incorporated herein by reference.
4.3	Form of Warrant Agreement, filed as an exhibit to the current report on Form 8-K filed with the Commission on January 28, 2005 and incorporated herein by reference.
4.4	Registration Rights Agreement, dated January 28, 2005, between the Company and Vertical Capital Partners, Inc., on behalf of the investors, filed as an exhibit to the current report on Form 8-K filed with the Commission on January 28, 2005 and incorporated herein by reference.

4.5	Security Agreement, dated January 28, 2005, between the Company and Vertical Capital Partners, Inc., on behalf of the investors, filed as an exhibit to the current report on Form 8-K filed with the Commission on January 28, 2005 and incorporated herein by reference.
4.6	Form of Subscription Agreement, filed as an exhibit to the current report on Form 8-K filed with the Commission on October 11, 2007 and incorporated herein by reference.
4.7	Form of 10% Secured Convertible Promissory Note, filed as an exhibit to the current report on Form 8-K filed with the Commission on October 11, 2007 and incorporated herein by reference.
4.8	Form of Warrant Agreement, filed as an exhibit to the current report on Form 8-K filed with the Commission on October 11, 2007 and incorporated herein by reference.
10.1	Exclusive License Agreement between Biowell Technology Corp. and Applied DNA Sciences, Inc. executed on October 8, 2002, filed as an exhibit to the registration statement on Form SB-2 filed with the Commission on February 15, 2005 and incorporated herein by reference.
10.2#	Technology Reseller Agreement, dated March 19, 2007 by and between Applied DNA Sciences and HPT International LLC, filed as an exhibit to the current report on Form 8-K filed with the Commission on March 23, 2007 and incorporated herein by reference.

10.3#	Joint Development and Marketing Agreement, dated April 18, 2007 by and between Applied DNA Sciences and International Imaging Materials, Inc., filed as an exhibit to the current report on Form 8-K filed with the Commission on April 24, 2007 and incorporated herein by reference.
10.4#	Product Development, Marketing and Distribution Agreement, dated May 8, 2007 by and between Applied DNA Sciences, Inc. and Champion Thread Company, Inc., filed as an exhibit to the current report on Form 8-K filed with the Commission on May 11, 2007 and incorporated herein by reference.
10.5#	Technology Reseller Agreement, dated May 30, 2007 by and between Applied DNA Sciences, Inc. and Printcolor Screen Ltd., filed as an exhibit to the current report on Form 8-K filed with the Commission on June 1, 2007 and incorporated herein by reference.
10.6#	Feasibility Study Agreement, dated June 27, 2007 by and between Applied DNA Sciences, Inc. and Supima, filed as an exhibit to the current report on Form 8-K filed with the Commission on July 3, 2007 and incorporated herein by reference.
10.7	Settlement Agreement and General Release of All Claims by and between the Applied DNA parties and Chanty Cheang, filed as an exhibit to the current report on Form 8-K filed with the Commission on May 4, 2007 and incorporated herein by reference.
10.8	Amendment to Engagement Letter, dated December 20, 2007, by and between Applied DNA Sciences, Inc. and ARjENT Limited, filed as an exhibit to the current report on Form 8-K filed with the Commission on December 28, 2007 and incorporated herein by reference.
10.9	Form of Employee Stock Option Agreement under The Applied DNA Sciences, Inc. 2005 Incentive Stock Plan of Applied DNA Sciences, Inc. filed as an exhibit to the quarterly report on Form 10-QSB filed with the Commission on August 14, 2008 and incorporated herein by reference.
10.10	Form of Director Stock Option Agreement under The Applied DNA Sciences, Inc. 2005 Incentive Stock Plan of Applied DNA Sciences, Inc. filed as an exhibit to the quarterly report on Form 10-QSB filed with the Commission on August 14, 2008 and incorporated herein by reference.
21.1	List of subsidiaries of Registrant filed as an exhibit to the registration statement on Form SB-2 filed with the Commission on January 18, 2006 and incorporated herein by reference.
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

A request for confidentiality has been filed for certain portions of the indicated document. Confidential portions have been omitted and filed separately with the Securities and Exchange Commission as required by Rule 24b-2 promulgated under the Securities Exchange Act of 1934

APPLIED DNA SCIENCES, INC.
INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors
Applied DNA Sciences, Inc.
Stony Brook, New York

We have audited the accompanying consolidated balance sheets of Applied DNA Sciences, Inc. (the "Company") as of September 30, 2008 and 2007 and the related consolidated statements of losses, deficiency in stockholders' equity, and cash flows for each of the two years in the period ended September 30, 2008. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based upon our audits.

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States of America). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company as of September 30, 2008 and 2007, and the results of its operations and its cash flows for each of the two years in the period ended September 30, 2008 in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note K, the Company is experiencing difficulty in generating sufficient cash flow to meet its obligations and sustain its operations, which raises substantial doubt about its ability to continue as a going concern. Management's plans in regard to this matter are described in Note K. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/RBSM LLP

New York, New York
December 15, 2008

APPLIED DNA SCIENCES, INC.
CONSOLIDATED BALANCE SHEETS

September 30,