DAIS ANALYTIC CORP

Form S-1/A October 13, 2011

As filed with the Securities and Exchange Commission on October 13, 2011

Registration No. 333- 176894

#### **UNITED STATES**

# SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

PRE-EFFECTIVE AMENDMENT NO. 1 To FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

DAIS ANALYTIC CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

\_\_\_\_\_

New York
(State or other jurisdiction of incorporation or

organization)

3990
(Primary Standard
Industrial
Classification Code
Number)

14-1760865 (I.R.S. Employer Identification Number)

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APPROXIMATE DATE OF PROPOSED SALE TO THE PUBLIC: From time to time after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

| Large accelerated filer | 0   | Accelerated filer | o |
|-------------------------|---|-------------------|---|
|                         |   | Smaller reporting |   |
| Non-accelerated filer   | o (Do not check if a smaller reporting company) | company           | X |

#### CALCULATION OF REGISTRATION FEE

|   |              | Proposed         |    |             |
|---|--------------|------------------|----|-------------|
|   |              | Maximum          |    |             |
|   |              | Aggregate        | A  | Amount of   |
|   | Amount to be | Offering         | R  | egistration |
| Title of Each Class of Securities to be Registered      | Registered   | Price(1)         |    | Fee(6)      |
| Common stock, \$0.01 par value per share(2)             | 4,312,500    | \$<br>21,562,500 | \$ | 2,503.41    |
| Underwriter Warrant(3)(4)(5)                            | 1 warrant    | \$<br>100        |    |             |
| Shares of Common Stock underlying Underwriter's Warrant | 431,250      | \$<br>2,587,500  | \$ | 300.41      |
| Amount Due (6)  |              |                  | \$ | 2,803.82    |

- (1) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
- (2) Includes 562,500 shares of our common stock that the underwriter has the option to purchase to cover over-allotments, if any.
- (3) No registration fee required pursuant to Rule 457(g) under the Securities Act of 1933.
- (4) Pursuant to Rule 416 under the Securities Act of 1933, this registration statement shall be deemed to cover the additional securities (i) to be offered or issued in connection with any provision of any securities purported to be registered hereby to be offered pursuant to terms which provide for a change in the amount of securities being offered or issued to prevent dilution resulting from stock splits, stock dividends, or similar transactions and (ii) of the same class as the securities covered by this registration statement issued or issuable prior to completion of the distribution of the securities covered by this registration statement as a result of a split of, or a stock dividend on, the registered securities.
- (5) Represents a warrant granted to the underwriter to purchase up to 431,250 shares of common stock (assuming full exercise of the over-allotment option).
- (6) Previously paid \$ 2,803.82

THE COMPANY HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE COMPANY SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND WE ARE NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED OCTOBER 13, 2011

#### PRELIMINARY PROSPECTUS

## 3,750,000 Shares of Common Stock

This is a firm commitment public offering of 3,750,000 shares of our common stock.

The public offering price for the common stock offered hereby is estimated to be between \$3.00 and \$5.00 per share. Our common stock is quoted on the OTC Bulletin Board under the symbol "DLYT.OB". On October 10, 2011, the last reported sale price for our common stock was \$0.37 per share. Immediately after the effectiveness of the registration statement of which this prospectus is a part, and prior to closing of this offering, we will effect a reverse stock split anticipated to be on a 10-for-1 basis. The proposed aggregate price of the shares offered hereby assuming a midpoint price of \$4.00 per share and excluding shares that may be sold on exercise of the underwriter's over- allotment option, is \$15.000.000.

We have applied for listing of our common stock on the NYSE AMEX Equities ("AMEX", formerly known as the American Stock Exchange) under the symbol "DLYT", which we expect to occur on or immediately prior to the date of this prospectus. No assurance can be given that our application will be approved. If the application is not approved, we will not complete this offering, we will not effect the 10-for-1 reverse stock split and the shares of our common stock will continue to be quoted on the OTC Bulletin Board

Investing in our securities involves certain risks, including those set forth in the "Risk Factors" section beginning on page 10 of this prospectus as well as those set forth in any prospectus supplement that should be considered in connection with an investment in our securities.

|   | Per Share | Total |
|---|-----------|-------|
| Public Offering Price per share               | \$        | \$    |
| Underwriting discounts and commission (1)     | \$        | \$    |
| Offering Proceeds to Dais, before expenses(2) | \$        | \$    |

<sup>(1)</sup> Excludes underwriter expenses of up to \$125,000 which would be reimbursable according to the underwriting agreement.

The underwriter expects to deliver our shares to purchasers in the offering on or about , 2011.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THE PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

| MDB Capital Gro                | up LLC |
|--------------------------------|--------|
| The date of this prospectus is | , 2011 |

<sup>(2)</sup> We estimate that the total expenses of this offering, excluding the underwriter's discount and commission will be approximately \$ We have granted to the underwriter a 45-day option to purchase up to 562,500 additional shares of common stock solely to cover over-allotments, if any. We have also agreed to issue to the underwriter a warrant to purchase up to a total of 431,250 shares of common stock (assuming full exercise of the over-allotment option) at an exercise price of \$ (120% of the public offering price). The underwriter warrant is exercisable at any time, in whole or in part, for five years from the date of effectiveness of the registration statement of which this prospectus is a part, subject to a one year lock-up.

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Unless otherwise stated or the context otherwise requires, the terms "Dais Analytic," "we," "us," "our" and the "Company" refer to Dais Analytic Corporation.

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with additional or different information. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

No dealer, salesperson or any other person is authorized in connection with this offering to give any information or make any representations about us, the securities offered hereby or any matter discussed in this prospectus, other than those contained in this prospectus and, if given or made, the information or representations must not be relied upon as having been authorized by us. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any security other than the securities offered by this prospectus, or an offer to sell or a solicitation of an offer to buy any securities by anyone in any circumstance in which the offer or solicitation is not authorized or is unlawful.

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## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections titled "Prospectus Summary", "Management's Discussion and Analysis of Financial Condition and Results of Operations", "Description of Business", "Risk Factors" and other sections generally, contains certain statements that constitute "forward-looking statements". These forward-looking statements include certain statements regarding intent, belief or current expectations about matters (including statements as to "beliefs," "expectations," "anticipations," "intentions" or similar words). Forward-looking statements are also statements that are not statements of historical fact. Because these statements are based on factors that involve risks and uncertainties, actual results may differ materially from those expressed or implied by the forward-looking statements. These factors include, among others:

- our ability to achieve and maintain profitability;
- the price volatility of the Common Stock;
- the historically low trading volume of the Common Stock;
- our ability to manage and fund our growth;
- our ability to attract and retain qualified personnel;
- litigation;
- our ability to compete with current and future competitors;
- our ability to obtain additional financing;
- general economic and business conditions;
- our ability to continue as a going concern;
- our ability to do business overseas;
- other risks and uncertainties included in the section of this document titled "Risk Factors"; and
- other factors discussed in our other filings made with the Commission.

The subsequent forward-looking statements relating to the matters described in this document and attributable to us or to persons acting on our behalf are expressly qualified in their entirety by such factors. Actual events or results may differ materially from those discussed in forward-looking statements as a result of various factors, including, without limitation, the risks outlined under "Risk Factors" and matters described in this prospectus generally. In light of these risks and uncertainties, there can be no assurance that the forward-looking statements contained in this prospectus will in fact occur. We have no obligation to publicly update or revise these forward-looking statements to reflect new information, future events, or otherwise, except as required by applicable laws, and we caution you not to place undue reliance on these forward looking statements.

#### Third Party Data

This prospectus also contains estimates, statistical, industry-related and market-related data, and other information concerning our industry, including market size and growth rates, which are based on industry publications, surveys and forecasts, based on or derived from third party sources which we believe are reliable. This information involves a number of limitations and assumptions which may or may not be or become true, and for the foregoing reasons you are cautioned not to give undue weight to the estimates presented in these third party materials. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in

"Risk Factors".

#### PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and does not contain all the information that you need to consider in making your investment decision. You should carefully read this entire prospectus before deciding whether to invest in the common stock. You should pay special attention to the "Risk Factors" section of this prospectus to determine whether an investment in the common stock is appropriate for you.

This registration statement, including the exhibits and schedules thereto, contains additional relevant information about us and our capital stock. We file annual, quarterly, and current reports, proxy statements, and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You can also request copies of the documents, upon payment of a duplicating fee, by writing the Public Reference Section of the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. These SEC filings are also available to the public from the SEC's web site at www.sec.gov.

#### About Dais Analytic Corporation

We have developed and are commercializing specialty nano-structured polymer materials (Aqualyte<sup>TM</sup>). Using Aqualyte <sup>TM</sup> materials we are creating value added products which are designed to: (i) improve the energy efficiency in Heating, Ventilation and Air Conditioning (HVAC) equipment, (ii) replace the chemical refrigerants used in today's HVAC systems as well as most all forms of refrigeration systems; (iii) remove impurities in contaminated water (such as waste water and seawater); and (iv) allow the storage of electrical energy in a device called an "ultracapacitor."

Dais' first commercial product, ConsERV<sup>TM</sup>, is a fixed plate energy recovery ventilator unit that attaches to most all forms of HVAC equipment. Through use of the Aqualyte<sup>TM</sup> materials, ConsERV<sup>TM</sup> assists building and home-owners to increase ventilation thereby improving indoor air quality while saving energy, lowering CO2 emissions, and allowing for smaller HVAC systems to be installed through the management of moisture and temperature content in the air.

Several applications that use the Aqualyte<sup>TM</sup> platform are under development. These potential applications include:

NanoAir<sup>TM</sup>, a water based packaged HVAC system that is potentially capable of achieving improvements in energy efficiency over traditional AC and refrigeration systems,

NanoClear<sup>TM</sup>, a water clean-up process that has been demonstrated to provide parts per billion potable water from most forms of contaminated water, including salt, brackish or wastewater1, and

NanoCap<sup>TM</sup>, an energy storage device (ultracapacitor) we are currently researching and developing that uses the attributes of the Aqualyte<sup>TM</sup> material to potentially provide significantly greater energy density and power than conventional capacitors or batteries.

We are a New York corporation established on April 8, 1993 as Dais Corporation. We subsequently changed our name to Dais Analytic Corporation on December 13, 1999. Our principal executive offices are located at 11552 Prosperous Drive, Odessa, FL 33556. Our telephone number is (727) 375-8484. Our website can be accessed at www.daisanalytic.com and www.conserv.com. Information contained in our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

#### Our Proprietary Technologies

We have multiple pending and issued patents in the U.S., China, Hong Kong and Europe, and under the Patent Cooperation Treaty (PCT). In addition, we co-own two PCT applications with Aegis Biosciences LLC, a biomaterials drug delivery technology company. These patents relate to, or are applications of, our nano-structured polymer materials that perform functions such as ion exchange and modification of surface properties. The polymers are selectively permeable to polar materials, such as water, in molecular form. Selective permeability allows these materials to function as a nano-filter in various transfer applications. These materials are made from base polymer resins available from commercial firms worldwide and possess what we believe to be some unique and controllable properties, such as:

Selectivity: Based on our research, we believe that when the polymer is made there are small channels created that are 5 to 30 nanometers in diameter. There are two types of these channels: hydrophilic (water permeable), and hydrophobic (water impermeable). The channels can be chemically tuned to be selective for the ions or molecules they transfer. The selectivity of the polymer can be adjusted to efficiently transfer water molecules from one face to the other using these channels.

1 Testing performed by the Pasco County Water District as reported 3/8/10, and Constellation Technology laboratory as reported 1/5/10 and 1/7/10

High transfer rate: Based on in-house testing protocols and related results, we have found that the channels created when casting the materials into a nano-structured membrane have a transfer rate of water molecules, or flux, greater than 90% of an equivalent area of an open tube. This feature is fundamental to the material's ability to transfer moisture at the molecular level while substantially allowing or disallowing the transfer of certain other substances at a molecular level.

Unique surface characteristics: The materials offer a surface characteristics that we believe inhibit the growth of bacteria, fungus and algae and prevent adhesives from attaching.

The molecular selectivity, transfer rate and surface coating properties, coupled with our ability to produce the nano-structured materials at what we believe is an affordable price, distinguishes our technology and value-added products. By incorporating our nano-structured materials into our products, we strive to address current real-world market needs by offering what we believe to be higher efficiencies and improved price performance, compared to, for example, other energy recovery mechanisms available for HVAC that use coated paper or desiccant materials instead of our nano-structured polymer materials. For further details about our technology, please refer to our "Description of Business" in this prospectus.

#### Our Target Markets

We are currently focusing our efforts on applications of our nano-structure polymer technology materials in the following areas:

#### **Energy Recovery Ventilators**

ConsERV<sup>TM</sup> is a heating, ventilation and air conditioning (HVAC) energy conservation product which after reviewing the results of various third party tests, we believe will save an average of up to 30% on HVAC ventilation air operating costs and allow HVAC equipment to be up to 30% smaller, reducing peak energy usage by up to 20% while simultaneously improving indoor air quality by increasing the level of fresh air ventilation. This product makes HVAC systems operate more efficiently, and in many cases results in energy and cost savings. ConsERV<sup>TM</sup> may be added to most existing HVAC systems, typically in commercial buildings, to provide ventilation within the structure. It pre-conditions the incoming air by passing the air through our nano-technology polymer which has been formed into a filter, known in the market as a fixed plate core. The nano-technology core uses the stale building air that is simultaneously exhausted to transfer heat and moisture into or out of the incoming air. For summer air conditioning, the core removes some of the heat and humidity from the incoming air, transferring it to the exhaust air stream thereby, under certain conditions, saving energy. For winter heating, the core transfers a portion of the heat and humidity into the incoming air from the exhaust air stream thereby often saving energy.

We believe that there is significant demand for energy recovery ventilators in the U.S. and international markets. As reported by Frost and Sullivan in 2007, the North American market for energy recovery ventilators (ERVs) was estimated to be approximately \$1.1 billion. Projections made at that time were for 200% growth from that level by 2012. Market drivers behind this growth include higher ventilation standards, greater end user awareness, LEED (Leadership in Energy Efficiency and Design) certification points or incentives, and integration into the products of original equipment manufacturers (OEMs). Sales of ConsERV<sup>TM</sup> in 2010 increased to \$2,949,814 from \$1,439,041 in 2009. We believe the combination of high efficiency and low maintenance requirement as well as rapid ERV market expansion is driving this sales growth.

Our ConsERV<sup>TM</sup> product is the primary focus of our resources and commercialization efforts. When compared to similar competitive products and based on test results conducted by the Air-Conditioning, Heating and Refrigeration Institute (AHRI), a leading industry association in 2008, we believe ConsERV<sup>TM</sup> is twice as effective in managing a combination of latent and sensible heat as other fixed plate cores. This study is publicly available and was not prepared for our benefit or funded by us.

Residential and Commercial Heating, Air-Conditioning and Refrigeration

Our water-based packaged HVAC system, NanoAir<sup>TM</sup>, which is in the early beta stage of development, dehumidifies and cools air in warm weather, or humidifies and heats air in cold weather. NanoAir<sup>TM</sup> may be capable of replacing a traditional refrigerant loop-based heating, cooling, and refrigeration system. We have a number of small prototype units showing fundamental heating, cooling, humidification, and dehumidification operations of this evolving application.

Based on our lab results to date, NanoAir<sup>TM</sup> may have the potential to reduce energy consumption by up to 50%, and is projected to be up to 3 times more energy efficient than current refrigerant gas-based technologies on the market today. Since heating and cooling costs account for approximately 19% of all energy consumed in the U.S. (second only to transportation), as stated by Dr. Steven Chu of the U.S. Department of Energy in 2010, we believe NanoAir<sup>TM</sup> may have the ability to provide significant energy savings. Further, since NanoAir<sup>TM</sup> uses no ozone-depleting refrigerants such as CFCs and HCFCs, the use of our nano-structured polymer technology may provide additional environmental and health benefits. We believe that there is a substantial market for HVAC systems that conserve energy without the use of conventional refrigerants.

\*projected

Projected NanoAir<sup>TM</sup> Benefit Comparison

NanoAir<sup>TM</sup> is being partially funded by a \$681,322 grant from the U.S. Department of Energy's Advanced Research Projects Agency – Energy (ARPA-E) awarded to us in September of 2010, and a \$254,500 grant from Pasco County, Florida in December of 2010. The grant from Pasco County requires us to pay the county 2% of the gross sales of products using a certain unique pump assembly for 5 years, or a total of \$1,000,000 whichever occurs first.

#### Water Clean-Up

According to water quality evaluated by the Pasco County Technical Services in March 2010, and the China Academy of Environmental Science in December 2010, our NanoClear<sup>TM</sup> prototype system has demonstrated the ability to remove salt and other impurities from water to produce potable water using what we believe is an environmentally friendly design projected to be more energy efficient, reduce capital costs, and lower operating expenditures up to 50% over the market leading technology in use today (Reverse Osmosis). We have developed a number of functional demonstration units of various sizes, which highlight the basics of how this system works to produce potable water. These demonstration units are being used as the basis for the application's next planned inflection point: the construction and operation of a 10 cubic meter (approximately 26,500 gallons per day) pilot plant to be located near our office outside of Tampa, Florida at a Pasco County off-line waste water treatment facility where the local municipal government has granted Dais permission to construct and operate the pilot NanoClear<sup>TM</sup> facility. The NanoClear<sup>TM</sup> application is currently in the early stages of beta development.

We believe significant market opportunities for the NanoClear<sup>TM</sup> process exist in water cleanup including waste water (e.g. pharmaceutical, electronics, and other industrial uses as well as municipal applications), water desalination (salt and brackish water clean-up), and an array of consumer applications. Unlike other water desalination technologies, we believe the NanoClear<sup>TM</sup> process may have the ability to handle high concentrations of salt with no lasting damage to the base membrane materials. The benefit of such a technological advancement in the water desalination industry may mean higher outputs of clean water per volume of contaminated water, and we believe the ability to produce a near zero discharge of contaminants from the process. The world market for water and wastewater amounted to \$346.9 billion in 2008. According to 360 Consultancy/Acon AG, World-Wide water market profile dated May 2009, the market is expected to expand further with high growth rates to \$374.4 billion by 2009, and \$412 billion by 2010. The Central Government of China, on January 30, 2011 announced a \$608 billion government-mandated program citing that it is a 'national priority' for China to improve water conservation in the next decade. As a part of this initiative the Chinese government also said that it would increase its efforts to improve water quality and irrigation, and that it aims to eradicate the problem of unsafe drinking water in rural areas by 2015.

Further, based on our projections, we believe certain facility and mechanical layouts of the NanoClear<sup>TM</sup> process for water clean-up may be able to accomplish 90-95% water capture vs. 40-60% for traditional Reverse Osmosis (RO) systems clean water using NanoClear<sup>TM</sup> has a projected energy/water cost of \$0.25 to \$0.33 per cubic meters, (desalination) vs. \$0.50-\$1 per cubic meters for Reverse Osmosis.2

#### **Energy Storage**

Based on initial material tests conducted by General Electric's Global Research and Development Center in 2008, and the University of Florida in 2010 and 2011, we believe that by applying a combination of our nano-material in a process which exercises key attributes of the material's properties, we may be able to construct an energy storage device akin to an ultracapacitor. An ultracapacitor is a device which stores energy similar to a battery but in this case with projected increases in energy density and lifetimes. We call this application NanoCap<sup>TM</sup>. We believe the key application for NanoCap<sup>TM</sup> would be in transportation. We signed a research agreement with the University of Florida to conduct materials testing for the time period from July 2010 through September 2011. Although very early in the development path, preliminary results obtained in research by both GE and the University of Florida suggest that a NanoCap<sup>TM</sup> ultracapacitor, if fully developed, may possess an energy density comparable to that of gasoline.

2 Produced internally by Dais using test results of the materials, and the materials in application in laboratory settings.

The market size for ultracapacitors, worldwide, is projected to be \$500 million by 2012 as estimated by Greentech Media in January 2010 and includes electric vehicles, various electronics, smart grid and other applications.

#### Other

We have identified other potential products for our nano-materials and processes. Some have basic data to support additional functionality and market differentiation of a product based on our nano-technology inventions. These other products are based, in part, upon the known functionality of our materials and processes. Management anticipates that many of these other applications will be developed in the future with partners already in a given sales channel or line of business with us, as we grow and are able to internally fund such activities, development, manufacturing, and sales.

We expect ConsERV<sup>TM</sup> to continue to be the focus of our commercial product sales through 2011 with a growing emphasis on moving the development of the NanoClear<sup>TM</sup> and NanoAir<sup>TM</sup> technologies towards commercialization. However, we cannot provide assurance that any of the ongoing projects under development will ultimately be successful or commercially viable.

#### Proposed Reverse Stock Split and Conversion of Debt

Immediately following the effectiveness of the registration statement which this prospectus is a part of, and prior to closing of this offering, we will effect a 10-for-1 reverse stock split.

In connection with the closing of this offering, we intend to have all convertible notes outstanding in the aggregate principal amount of \$2,500,000 plus accrued interest, discharged by conversion or repayment using proceeds from the offering. As of October 10, 2011 we estimate that approximately \$1.51 million of net proceeds from the offering will be used to repay convertible notes, and that approximately 481,800 shares of common stock will be issued in the conversion of notes.

We have entered into an agreement with our CEO, Tim Tangredi, that provides that upon closing of the offering Mr. Tangredi's accrued compensation through the closing date in the approximate amount of \$1.05 million shall be paid with a combination of (a) cash, which we estimate at this time to be approximately \$380,000, which is intended to cover payment of income and other taxes due from the payment of such accrued compensation, and (b) shares of restricted common stock at a price equal to the price per share paid by investors in the public offering, for the remainder (which is assumed for purposes of this calculation to be \$4.00 per share after giving effect to the anticipated 10-for-1 reverse stock split, and based on this assumption would consist of approximately 166,971 shares of common stock). In addition, net proceeds from the offering will be used to pay approximately \$358,000 in accrued compensation to two employees, Patricia Tangredi and David Longacre.

For additional details regarding the above, see "Use of Proceeds" below in this prospectus.

#### Risk Factors

An investment in our common stock involves a high degree of risk. You should carefully consider the risks described under "Risk Factors" beginning on page 10 of this prospectus, as well as other information included in this prospectus, including our financial statements and the notes thereto, before making an investment decision.

#### The Offering

The following summary contains basic information about the offering and our common stock and is not intended to be complete. It does not contain all the information that is important to you. For a more complete understanding of our common stock, please refer to the section of this prospectus entitled "Description of Capital Stock."

Issuer Dais Analytic Corporation, a New York

corporation.

Common stock offered by us 3,750,000 shares of common stock, par value \$0.01

per share. (1)

Over-allotment option We have granted the underwriter an option to

purchase up to an additional 562,500 shares of common stock within 45 days of the date of this prospectus in order to cover over-allotments, if any.

Common Stock outstanding before

this offering 3,751,760 shares of common stock (1)(2)(3)

Common stock outstanding after

this offering 7,501,760 shares of common stock (1)(2)(3)

Use of Proceeds We intend to use the net proceeds from the sale of

our common stock in this offering for working capital, to pay certain outstanding note obligations, to pay accrued salaries, and for general corporate purposes. For additional details concerning the use of proceeds see the section below in the prospectus

titled "Use of Proceeds."

Market and trading symbol for the Our common stock is quoted on the

common stock Over-the-Counter Bulletin Board under the symbol

"DLYT," and we have applied to list on AMEX.

Proposed AMEX listing symbol

for our common stock "DLYT"

Underwriter common stock purchase warrant

In connection with this offering, we have also agreed to grant MDB Capital Group LLC a warrant to purchase up to a number of the shares of common stock equal to 10% of the shares sold in this offering. If this warrant is exercised, each share may be purchased by MDB Capital Group LLC at \$ per share (equal to 120% of the price of the shares sold in this offering.)

Lockup Agreements

We intend to have each of our officers and directors agree that for a period of 180 days from the date of the underwriting agreement, they will be subject to a lock up prohibiting any sales, transfers or hedging transactions in our securities that are held by them. See section titled "Lockup Agreements" in this prospectus.

- (1) We have, for purposes of disclosure in this prospectus, assumed consummation of a 10-for-1 reverse stock split immediately following the effectiveness of the registration statement of which this prospectus is a part, and have assumed an offering price of \$4.00 per share (which is the midpoint of our expected offering range of \$3.00 to \$5.00 per share).
- (2) The number of shares of our common stock outstanding before and after this offering is based on the number of shares outstanding as of October 10, 2011, after giving effect to the anticipated 10-for-1 reverse stock split, and excludes:
  - 1,763,609 shares of our common stock issuable upon exercise of stock options under our stock plans,
  - 2,657,533 shares of our common stock reserved for issuance under various outstanding warrant agreements,
  - Shares of our common stock issuable upon conversion of our convertible promissory notes in the aggregate principal amount of \$2,500,000 plus accrued interest as of the closing date of the offering, which (as of October 10, 2011) if fully converted into shares would result in the issuance of approximately 1,063,224 shares. The conversion of these notes are subject to limitations on conversion, and because of these limitations we estimate that as of October 10, 2011 approximately \$1.51 million of net proceeds from the offering will be used to repay principal and interest under these notes, and that approximately 481,800 shares of common stock will be issued in the conversion of the notes (see sections titled Use of Proceeds and Capitalization below in this prospectus);
  - 921,500 shares of our common stock reserved for future issuance under our stock plans; and,
  - Shares of our common stock issuable upon conversion of a portion of the accrued salary of our CEO to common stock; as of October 10, 2011 the CEO's total accrued unpaid compensation was \$1,047,884, which would be converted at the closing date of the offering into approximately 166,971 shares of common stock (based on an assumed public offering price of \$4.00 per share, and assuming \$380,000 of such accrued compensation will be paid to the CEO in cash).

Unless otherwise specifically stated, information throughout this prospectus assumes that none of our outstanding options or warrants to purchase shares of our common stock have been exercised, and that none of our convertible securities have been converted.

(3) Unless otherwise indicated, the number of shares of common stock presented in this prospectus excludes shares issuable pursuant to the exercise of the underwriter's over-allotment option and underwriter's warrant.

#### SUMMARY FINANCIAL DATA

The table below includes historical selected financial data for each of the years ended December 31, 2010 and 2009 (as restated), derived from our audited financial statements included elsewhere in this prospectus. The table below also includes historical financial data for the three and six month periods ending June 30, 2010 (as restated) and 2011, derived from our unaudited financial statements included elsewhere in this prospectus.

You should read the historical selected financial information presented below in conjunction with the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and our financial statements and the notes to those financial statements included elsewhere in this prospectus. Historical results are not necessarily indicative of the results that may be expected for any future period.

|                      | For the Three Months      |                 |    |             |                       |            |                          |                         |            |             |            |             |
|----------------------|---------------------------|-----------------|----|-------------|-----------------------|------------|--------------------------|-------------------------|------------|-------------|------------|-------------|
|                      | For the Years Ended Ended |                 |    |             |                       |            | For the Six Months Ended |                         |            |             |            |             |
|                      | December 31,              |                 |    |             |                       | Jui        | 30.                      | June 30,                |            |             |            |             |
|                      |                           | 2010            |    | 2009        |                       | 2011 2010  |                          |                         | 2011       |             | 2010       |             |
|                      |                           |                 |    | as restated |                       |            |                          | as restated             |            |             |            |             |
|                      |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| STATEMENT OF         |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| OPERATIONS:          |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| Revenues             | \$ 3                      | 3,342,468       | \$ | 1,531,215   | \$                    | 1,124,079  | \$                       | 1,010,142               | \$         | 1,982,773   | \$         | 1,417,454   |
| Cost of goods sold   |                           | 2,290,041)      | Ψ  | (1,071,098) | Ψ                     | (806,674)  |                          | (550,196)               |            | (1,507,564) | Ψ          | (871,522)   |
| Operating expenses   |                           | 2,931,274)      |    | (3,224,592) |                       | (803,725)  |                          | (330,190) $(1,029,394)$ |            | (1,728,058) |            | (1,588,914) |
| Loss from            | (2                        | 2,931,274)      |    | (3,224,392) |                       | (803,723)  |                          | (1,029,394)             |            | (1,720,030) |            | (1,300,314) |
| operations           | (1                        | ,878,847)       |    | (2,764,475) |                       | (486,320)  |                          | (569,448)               |            | (1,252,849) |            | (1,042,982) |
| Change in fair value |                           | .,0/0,04/)      |    | (2,704,473) |                       | (400,320)  |                          | (309,440)               |            | (1,232,049) |            | (1,042,962) |
| _                    |                           | <i>(</i> 10 001 |    | (2.721.604) |                       | 1 604 170  |                          | 1 925 004               |            | (657,027)   |            | 227.066     |
| of warrant liability |                           | 618,801         |    | (3,731,694) |                       | 1,694,170  |                          | 1,835,094               |            | (657,937)   |            | 327,066     |
| Interest and other   |                           | (172.547)       |    | (620,007)   |                       | (416.065)  |                          | (55.022)                |            | (570 774)   |            | (101.726)   |
| expense              |                           | (173,547)       | ф  | (620,907)   | ф                     | (416,265)  |                          | (55,233)                |            | (579,774)   | ф          | (101,736)   |
| Net loss             | \$ (1                     | ,433,593)       | \$ | (7,117,076) | \$                    | 791,585    | \$                       | 1,210,413               | \$         | (2,490,560) | \$         | (817,652)   |
| Net loss per         |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| common share,        |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| basic                | \$                        | (0.05)          | \$ | (0.36)      | \$                    | 0.02       | \$                       | 0.04                    | \$         | (0.07)      | \$         | (0.03)      |
| Net loss per         |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| common share,        |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| diluted              | \$                        | (0.05)          | \$ | (0.36)      | \$                    | 0.02       | \$                       | 0.03                    | \$         | (0.07)      | \$         | (0.03)      |
| Weighted average     |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| common shares        |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| outstanding, basic   | 29                        | 9,985,632       |    | 19,960,150  | 35,089,169 29,800,194 |            |                          |                         | 34,335,348 |             | 29,577,797 |             |
| Weighted average     |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| common shares        |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| outstanding, diluted | 29                        | ,985,632        |    | 19,960,150  |                       | 56,239,845 |                          | 40,245,491              |            | 34,335,348  |            | 29,577,797  |
|                      |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| PROFORMA: *          |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| Proforma net loss    |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| per common share,    |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| basic                | \$                        | (0.48)          | \$ | (3.57)      | \$                    | 0.23       | \$                       | 0.41                    | \$         | (0.32)      | \$         | (0.11)      |
| Proforma net loss    |                           | Ì               |    | , ,         |                       |            |                          |                         |            | , ,         |            | , ,         |
| per common share,    |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |
| diluted              | \$                        | (0.48)          | \$ | (3.57)      | \$                    | 0.14       | \$                       | 0.30                    | \$         | (0.32)      | \$         | (0.11)      |
| Proforma weighted    |                           | 2,998,563       | ,  | 1,996,015   |                       | 3,508.917  |                          | 2,980,019               |            | 3,433,535   |            | 2,957,780   |
| average common       |                           | , ,             |    | , -,-       |                       | ,          |                          | , -,-                   |            | , ,         |            | , , , ,     |
|                      |                           |                 |    |             |                       |            |                          |                         |            |             |            |             |

shares outstanding,

basic

| _ | ******             |           |           |           |           |           |           |
|---|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| P | Proforma weighted  |           |           |           |           |           |           |
| a | verage common      |           |           |           |           |           |           |
| S | hares outstanding, |           |           |           |           |           |           |
| d | iluted             | 2,998,563 | 1,996,015 | 5,623,985 | 4,024,549 | 3,433,535 | 2,957,780 |

<sup>\*</sup> The impact of a 10-for-1 reverse stock split to be effected immediately after the effectiveness of the registration statement, of which this prospectus is a part, has been applied retroactively in the above proforma calculations.

# STATEMENT OF FINANCIAL CONDITION:

|  |    | Decemb      | oer 3 | 1                   | June        |    |                     |
|--|----|-------------|-------|---------------------|-------------|----|---------------------|
|  |    | 2010        |       | 2009<br>as restated | 2011        |    | 2010<br>as restated |
| Working capital                        | \$ | (2,861,488) | \$    | (2,265,370) \$      | (1,846,593) | \$ | (3,028,616)         |
| Total assets                           | \$ | 1,970,573   | \$    | 1,620,746 \$        | 2,972,862   | \$ | 2,070,061           |
| Total long-term notes payable, related |    |             |       |                     |             |    |                     |
| party, less current installments       | \$ | _           | \$    | 300,000 \$          | _           | \$ |                     |
| Total shareholders' deficit            | \$ | (6,722,092) | \$    | (7,256,058) \$      | (6,323,185) | \$ | (7,345,051)         |

#### RISK FACTORS

You should carefully consider the risks described below before making an investment decision. Our business, financial condition, results of operations or cash flows could be materially adversely affected by any of the events or circumstances described in these risk factors. The valuation for the Company could also decline due to any of the events or circumstances, and you may lose all or part of your investment. This document also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of several factors, including the risks faced by us described below and elsewhere in this prospectus. In assessing these risks, you should also refer to the other information contained in this prospectus, including our financial statements and related notes.

#### Risks Related to Our Business

Our independent registered public accounting firm has issued an unqualified opinion with an explanatory paragraph to the effect that there is substantial doubt about our ability to continue as a going concern.

Our independent registered public accounting firm has issued an unqualified opinion with an explanatory paragraph to the effect that there is substantial doubt about our ability to continue as a going concern. This unqualified opinion with an explanatory paragraph could have a material adverse effect on our business, financial condition, results of operations and cash flows. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources" and Footnotes to our financial statements for the fiscal year ended December 31, 2010, included elsewhere in this prospectus.

We have no committed sources of capital and do not know whether additional financing will be available when needed on terms that are acceptable, if at all. This going concern statement from our independent registered public accounting firm may discourage some investors from purchasing our stock or providing alternative capital financing. The failure to satisfy our capital requirements will adversely affect our business, financial condition, results of operations and prospects.

Unless we raise additional funds, either through the sale of our securities or one or more collaborative arrangements, we will not have sufficient funds to continue operations. Even if we take these actions, they may be insufficient, particularly if our costs are higher than projected or unforeseen expenses arise.

We intend to use proceeds from the offering to repay secured and unsecured convertible promissory notes in the aggregate principal amount of \$2,500,000. However, if we do not complete the offering, we may be unable to convert, repay or secure an extension of these notes. If we do not complete the offering, and if we are unable to reach an agreement with our note holders regarding conversion, repayment and/or extension of the maturity date of these notes, the note holders could foreclose on our assets, which ultimately could require us to curtail or cease our operations and could ultimately result in the loss of our patent and patent applications.

We intend to use proceeds from the offering to repay secured and unsecured convertible promissory notes in the aggregate principal amount of \$2,500,000. However, if we do not complete the offering, we may be unable to convert, repay or secure an extension of these notes. Apart from proceeds from the contemplated offering, we do not currently have, and do not expect to attain, adequate funds for repayment of the above-mentioned notes from our current operations. Although we intend to continue to finance our operations, including the repayment of these notes, primarily through private sales of debt and equity securities, we may not be able to secure additional financing to repay the notes on acceptable terms, if at all. Further, our outstanding secured \$1.5 million convertible promissory note and the \$1.0 million unsecured convertible promissory note contain limitations on the amount of debt we can incur prior to repayment of these notes. Hence, absent completion of the contemplated offering, unless the note holder waive s the debt limit we may not be able to avail ourselves of sufficient financing should it be available. Further, the unsecured promissory note and the secured convertible promissory note provide for conversion of the principal and interest into shares of our common stock, upon certain conditions and subject to certain limitations. Any conversion of either of these notes could substantially dilute existing shareholders. Absent completion of the contemplated offering, if we are unable to secure additional financing to repay the notes we will seek to renegotiate the notes. However, there is no guarantee that the note holders will accept any offer we may make and may request additional concessions from us for any accommodation we do secure. Any terms we may be able to secure may not be favorable to us. Unfavorable terms would adversely impact our business, financial condition and/or results of operations. In the event we are unable to secure such additional financing sufficient to pay the notes prior to their respective maturity dates and we are not able to renegotiate the terms of the note, the note holders will have the option to either convert the principal and interest into shares of our common stock or foreclose on the notes, which would have material adverse consequences on our business operations, financial condition, results of operations and cash flows and possibly result in the loss of all of our patent rights and the failure of our business.

If we do not repay or convert the principal and interest on the above mentioned \$1.5 million 10% interest secured convertible note when due, we may lose all our patents and patent applications.

If we do not repay the \$1,500,000 10% secured convertible note currently outstanding when due we could suffer the loss of our patents and patent applications, which secure our payment obligations under this note. Our success depends, to a significant extent, on the technology that is incorporated in our product and the underlying patents and patent applications securing this note. We intend to continue to finance our operations, including the repayment of this note, primarily through sales of debt and equity securities. If the contemplated offering is not completed, we will have to seek alternative financing and may not be able to secure such additional financing to repay the note on acceptable terms, if at all. If we are not able to repay this note there is no guarantee that the note holder will accept any offer we may make with regard to extending or converting this note. Further, the note holder may request additional concessions from us in return for extending or converting the note. Any re-negotiated terms we may be able to secure may not be favorable to us. Unfavorable terms, in either a financing transaction or debt renegotiation, would adversely impact our business, financial condition and/or results of operations. In the event (i) the contemplated offering is not completed and we are unable to secure additional financing sufficient to pay this note, (ii) this note is not converted into shares of our common stock, or (iii) we are not able to renegotiate the terms of this convertible note, the note holder will have the option to foreclose on all of our patents and patent applications securing the notes, which would likely result in the failure of our business.

We have a history of operating losses, and we expect our operating losses to continue for the foreseeable future. If we fail to obtain additional financing we will be unable to execute our business plan and/or we may not be able to continue as a going concern.

We have incurred substantial losses since we were funded in 1993 and have not achieved profitability in any year to date. We have developed a family of nano-structured polymers and processes and are now marketing our first product application, ConsERV<sup>TM</sup>. We anticipate the other listed applications in this document may take at least 6 to 48 months to develop. We expect our operating losses to continue for the foreseeable future as we continue to expend substantial resources to expand the ConsERV<sup>TM</sup> business while working to bring the identified applications to the market including research and development, design and testing, obtaining third party validations, identifying and securing collaborative partnerships, executing to enter into strategic relationships, or selling materials or value-added components. Furthermore, even if we achieve our projection of selling a greater number of ConsERV<sup>TM</sup> units in 2011, we anticipate that we will continue to incur losses until we can cost-effectively produce and sell our products to a wider market. Our accumulated deficit was \$38,128,522 as of June 30, 2011. It is possible that we will never generate sufficient revenue to achieve and sustain profitability. Even if we achieve profitability, we may not be able to sustain or increase profitability.

We financed our operations since inception primarily through private sales of our common stock and preferred stock, issuance of convertible promissory notes; issuance of unsecured promissory notes, cash received in connection with exercise of warrants, license fees and the sale of certain fuel cell assets in 2002. As of June 30, 2011, we had \$2,746,359 in current assets.

Even if we are successful in raising additional equity capital to fund our operations, we will still be required to raise an additional substantial amount of capital in the future to fund our development initiatives and to achieve profitability. Our ability to fund our future operating requirements will depend on many factors, including the following:

- ability to obtain funding from third parties;
- progress on research and development programs;
- time and cost required to gain third party approvals;
- cost of manufacturing, marketing and distributing our products;
- cost of filing, prosecuting and enforcing patents, patent applications, patent claims and trademarks;
  - status of competing products; and
  - market acceptance and third-party reimbursement of our products, if successfully developed.

There are no assurances that future funding will be available on favorable terms or at all. If additional funding is not obtained, we will need to reduce, defer or cancel development programs and planned initiatives, to the extent necessary. The failure to fund our capital requirements would have a material adverse effect on our business, financial condition and results of operations.

Failure to achieve and maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act of 2002 could have a material adverse effect on our business and operating results. In addition, current and potential stockholders could lose confidence in our financial reporting, which could have a material adverse effect on our stock price.

Effective internal controls are necessary for us to provide reliable financial reports and effectively prevent fraud. If we cannot provide reliable financial reports or prevent fraud, our operating results could be harmed. We are required to document and test our internal control procedures in order to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act, which requires annual management assessments of the effectiveness of our internal controls over financial reporting. During the course of our testing, we may identify deficiencies which we may not be able to remediate in time for compliance with the requirements of Section 404. In addition, if we fail to maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time; we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act. Failure to achieve and maintain an effective internal control environment could also cause investors to lose confidence in our reported financial information, which could have a material adverse effect on our stock price.

Our CEO and CFO identified a material weakness in our internal controls over financial reporting relating to the accounting and disclosure for complex and non-standard common stock warrant transactions, which required us to restate our financial statements for the year ended December 31, 2009 as provided herein. To address our material weakness related to the accounting and disclosure for complex financial instruments, we have enhanced our internal control processes in order to be able to comprehensively review the accounting and disclosure implications of such transactions on a timely basis.

We cannot provide assurance as to the result of these efforts. We cannot be certain that any measures we take will ensure that we implement and maintain adequate internal controls in the future. 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.

In the event the lease on our corporate office and production space is terminated, we may not be able to acquire a lease on another suitable property, or a lease on a suitable property at a comparable cost.

Ethos Business Ventures, LLC is our landlord. Our CEO, Mr. Tangredi, is a principal owner of this entity. We note that under the terms of our lease agreement for our corporate office and production space, the lease may be terminated upon 30 days prior written notice by landlord and 90 days prior written notice by us. If this lease is terminated, or if for any reason Mr. Tangredi should become unable to continue to lease this space to us, we may not be able to acquire another lease for another suitable property or a lease on a suitable property at a comparable cost in a timely manner, which could materially disrupt our operations. Even if we are able to relocate into another suitable property at a comparable cost in a timely manner, we would incur significant moving expenses.

Our future indebtedness could adversely affect our financial health.

We have and may continue to incur a significant amount of indebtedness to finance our operations and growth. Any such indebtedness could result in negative consequences to us, including:

- increasing our vulnerability to general adverse economic and industry conditions;
- requiring a portion of our cash flow from operations be used for the payment of
  interest on our debt, thereby reducing our ability to use our cash flow to fund
  working capital, capital expenditures and general corporate requirements;
- limiting our ability to obtain additional financing to fund future working capital, capital expenditures and general corporate requirements;
- limiting our flexibility in planning for, or reacting to, changes in our business;
- placing us at a competitive disadvantage to competitors who have less indebtedness;
   and
- as the majority of our assets are pledged under a significant portion of our outstanding debt, the failure to meet the terms and conditions of the debt instruments, or a failure to timely rearrange the current terms and conditions of the notes, if so required, will result in us having no access to our technology.

The recent economic downturn has affected, and is likely to continue to adversely affect, our operations and financial condition potentially impacting our ability to continue as a going concern.

The recent economic downturn has resulted in a reduction in new construction and less than favorable credit markets, both of which may adversely affect us. Certain vendors from which we currently secure parts for our ConsERV<sup>TM</sup> product have and may continue to either reduce or eliminate payment terms. Hence, more capital is required to secure parts necessary to produce our products. In addition, our products are often incorporated in new construction which has experienced a marked down turn in project starts over the past year and such trend is expected for 2011. Although the portion of new construction most affected is home sales, which represents a minority of our sales, commercial construction has also experienced a reduction in starts with some projects being delayed and possibly eliminated. If the commercial construction market stagnates or decreases in volume or project size, our operations and financial condition could be negatively impacted. Various economic stimulus measures by the federal and state governments appear to have targeted energy products. ConsERV<sup>TM</sup> may qualify under said programs and we may potentially benefit. However, when and if we will experience any increase in sales or investment due to these programs is uncertain. As noted above, we intend to continue to finance operations, including the repayment of all outstanding debt, such as the secured convertible note and unsecured promissory note, primarily through private sales of debt and equity securities. In light of the recent economic downturn we may not be able to secure additional financing on acceptable terms, if at all. Unfavorable terms for a financing transaction would adversely impact our business, financial condition and/or results of operations. In the event we are unable to secure additional financing our business may fail.

If we fail to successfully address the challenges, risks and uncertainties associated with operating as a public company, our business, results of operations and financial condition would be materially harmed.

We have and will continue to incur a significant increase in costs as a result of operating as a public company, and our management has and will be required to devote substantial time to new compliance initiatives. Until November of 2008 we had never operated as a public company. In preparation for and since reporting as a public company, we have and expect to continue to incur significant legal, accounting and other expenses that we did not incur as a non-reporting company. In addition, the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), as well as new rules subsequently implemented by the Securities and Exchange Commission (the "SEC") and various stock exchanges, has imposed many new requirements on public companies, including requiring changes in corporate governance practices. Our management and other personnel have and will continue to devote a substantial amount of time to these new compliance procedures.

As a public company, we are now subject to the reporting requirements of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), the Sarbanes-Oxley Act and the rules promulgated by the SEC and AMEX, if and when accepted, in response to the Sarbanes-Oxley Act. The Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and financial condition. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal controls for financial reporting.

If we or our independent registered public accounting firm identifies deficiencies in our internal controls that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by SEC or other regulatory authorities, which would entail expenditure of additional financial and management resources.

These rules and regulations could also make it more difficult for us to attract and retain qualified independent members of our Board of Directors. Additionally, we have found these rules and regulations make it more difficult and more expensive for us to obtain director and officer liability insurance. We have, and may be required once again, to accept reduced policy limits and/or coverage or incur substantially higher costs to obtain the same or similar coverage.

Our ConsERV<sup>TM</sup> product is in small volume production, we have no long term experience manufacturing our products on a commercial basis and may not be able to achieve cost effective large volume production.

Our ConsERV<sup>TM</sup> product is built in growing volumes. Our ability to expand commercial production of that product is subject to significant uncertainties, including: completion of necessary product automation, developing experience in manufacturing and assembly on a large commercial scale; assuring the availability of raw materials and key component parts from third party suppliers; and developing effective means of marketing and selling our product.

We are in the process of assembling our ConsERV<sup>TM</sup> product at our facility in Odessa, Florida with overflow being produced by outsourced firms, which limits our capital outlay. Initial production costs of this product line are high with no or a lower than desired profit margin. As a result, we believe we will need to reduce unit production costs, including the nano-structured materials themselves made to our specifications by third parties, over time in order to offer our products at a profitable basis on a commercial scale. Our ability to achieve cost reductions in all areas of nano-structured materials and value added products depends on entering into suitable manufacturing relationships with component suppliers, as well as increasing sales volumes so that we can achieve economies of scale. A failure to achieve a lower cost structure through economies of scale and improvements in engineering and manufacturing in a timely manner would have a material adverse effect on our business and financial results. There can be no assurance that we will obtain higher production levels or that the anticipated sales prices of our products will ever allow an adequate profit margin.

We may not be able to meet our product development and commercialization milestones.

We have established internal product and commercialization milestones and dates for achieving development goals related to technology and design improvements of our products. To achieve these milestones we must complete substantial additional research, development and testing of our products and technologies. Except for our ConsERV<sup>TM</sup> product, we anticipate that it will take at least 6 to 36 months to develop and ready our other products for scaled production. Product development and testing are subject to unanticipated and significant delays, expenses and technical or other problems. We cannot guarantee that we will successfully achieve our milestones. Our business strategy depends on acceptance of our products by key market participants and end-users.

Our plans and ability to achieve profitability depend on acceptance by key market participants, such as vendors and marketing partners, and potential end-users of our products. We continue to educate designers and manufacturers of HVAC equipment with respect to our ConsERV<sup>TM</sup> product. More generally, the commercialization of our products may also be adversely affected by many factors that are out of our control, including:

- willingness of market participants to try a new product and the perceptions of these market participants of the safety, reliability and functionality of our products;
- emergence of newer, possibly more effective technologies;
- future cost and availability of the raw materials and components needed to manufacture and use our products;
- cost competitiveness of our products; and
- adoption of new regulatory or industry standards which may adversely affect the use or cost of our products.

Accordingly, we cannot predict with any certainty that there will be acceptance of our products on a scale sufficient to support development of mass markets for those products.

We are dependent on third party suppliers and vendors for the supply of key components for our products. We are dependent on third parties to manufacture the key components needed for our nano-structured based materials and value added products made with these materials. Accordingly, a supplier's failure to supply components in a timely manner, or to supply components that meet our quality, quantity and cost requirements, technical specifications, or the inability to obtain alternative sources of these components on a timely basis or on terms acceptable to us, would create delays in production of our products or increase unit costs of production. Certain of the components contain proprietary products of our suppliers, or the processes used by our suppliers to manufacture these components are proprietary. If we are required to replace any of our suppliers, while we should be able to obtain comparable components from alternative suppliers at comparable costs, this would create a delay in production. If we experience such delays or our third party suppliers and vendors fail to supply us with components that meet our quality, quantity, or cost standards, we may lose our customers or be subject to product liability claims. Our applications require extensive commercial testing and will take long periods of time to commercialize.

Our nano-structured materials and associated applications need to undergo extensive testing before becoming commercial products. Consequently, the commercialization of our products could be delayed significantly or rendered impractical. Moreover, much of the commercial process testing will be dependent on the efforts of others. Any failure in a manufacturing step or an assembly process may render a given application or our nano-structured materials unsuitable or impractical for commercialization. Testing and required development of the manufacturing process will require the expenditure of funds and take time and effort.

We have not devoted any significant resources towards the marketing and sale of our products, we expect to face intense competition in the markets in which we do business, and expect to rely, to a significant extent, on the marketing and sales efforts of third parties that we do not control.

To date, we primarily focused on the sale of ConsERV<sup>TM</sup> products and, while we have sold increasing quantities of our products, even by adding staff experienced in the industry we continue to experience a learning curve in the marketing and sale of products on a commercial basis. We expect that the marketing and sale of the ConsERV product will continue to be conducted by a combination of independent manufactures representatives, third-party strategic partners, distributors, or OEMs. Consequently, commercial success of our products will depend to a great extent on the efforts of others. We intend to enter into additional strategic marketing and distribution agreements or other collaborative relationships to market and sell our nano-structured materials and value added product. However, we may not be able to identify or establish appropriate relationships in the future. Even if we enter into these types of relationships, we cannot assure you that the distributors or OEMs with which we form relationships will focus adequate resources on selling our products or will be successful in selling them. In addition, our chosen third-party distributors or OEMs may require us to provide volume price discounts and other allowances, customize our products or provide other concessions which could reduce the potential profitability of these relationships. To the extent any strategic relationships that we establish are exclusive, we may not be able to enter into other arrangements at a time when the distributor with which we form a relationship is not successful in selling our products or has reduced its commitment to marketing our products. Failure to develop sufficient distribution and marketing relationships in our target markets will adversely affect our commercialization schedule and, to the extent we enter into such relationships, the failure of our distributors and other third parties in assisting us with the marketing and distribution of our products may adversely affect our financial condition and results of operations.

We will face intense competition in the markets of our product applications for our nano-structured materials and value-added products. We will compete directly with currently available products, some of which may be less expensive. The companies that make these other products may have established sales relationships and more name-brand recognition in the market than we do. In addition, some of those companies may have significantly greater financial, marketing, manufacturing and other resources.

Our future results could be harmed by economic, political, regulatory and other risks associated with international sales and operations.

We intend to market, distribute and service our products on an international basis and expect to derive a significant portion of our revenue in coming years from international sales. If we fail to successfully sell our products internationally, our ability to increase our future revenue and grow our business would be impaired. We have limited experience developing, and no experience manufacturing, our products to comply with the commercial, regulatory and legal requirements of international markets. Our success in those markets will depend on our ability to secure relationships with foreign resellers and our ability to manufacture products that meet foreign regulatory and commercial requirements. In addition, our planned international operations could be harmed by a variety of factors, including but not limited to:

- increased costs associated with maintaining international marketing efforts;
- compliance with potential United States Department of Commerce export controls;
- increases in duty rates or other adverse changes in tax laws;
- trade protection measures and import or export licensing requirements;
- fluctuations in currency exchange rates;
- political and economic instability in foreign countries; and
- difficulties in securing and enforcing intellectual property rights, foreign (where filed and obtained) or domestic, and time and complexities of vetting and establishing relations with foreign resellers or licensees including but not limited to designing, validating and marketing a product geared specifically to a particular market segment.

We depend on our intellectual property and failure to protect it could enable competitors to market products with similar features that may reduce demand for our products.

We currently have eight United States patents, nine patent applications and co-own six patent applications, some of which apply to the composition and structure of a family of ion conducting polymers and membranes. These patents and patent applications often make reference to applications for, and in some instances, are application patents relating to materials we are developing. Our patent applications may or may not mature into issued patents.

Our success depends, to a significant extent, on the technology that is incorporated in our product. Although some of the inventions which we have obtained or applied for patent protection are no longer suitable for use with our planned products, we believe that some of the other inventions covered by the patents and patent applications are important to the success of our products. If we are unable to protect our intellectual property, competitors could use our intellectual property to market products similar to our products, which could reduce demand for our products. We may be unable to prevent unauthorized parties from attempting to copy or otherwise obtain and use our products or technology. Policing unauthorized use of our technology is difficult, and we may not be able to prevent misappropriation of our technology, particularly in foreign countries where the laws may not protect our intellectual property as fully as those in the United States. Others may circumvent trade secrets, trademarks and copyrights that we own or may own. Any such infringements, or any alleged infringements, could have a material adverse effect on our business, results of operations, and financial condition.

Any of the United States patents or foreign patents owned by us or subsequently issued to us may be invalidated, circumvented, challenged or rendered unenforceable. We may not be issued any patents as a result of our pending and future patent applications and any patents we are issued may not have the claim coverage sought by us or necessary to prevent others from introducing similar products. Any litigation surrounding our patent rights could force us to divert significant financial and other important resources away from our business operations.

Some of our intellectual property is not covered by any patent or patent application. We seek to protect this proprietary intellectual property, which includes intellectual property that may not be patented or patentable, in part by confidentiality agreements with our distributors and employees. These agreements afford only limited protection and may not provide us with adequate remedies for any breach or prevent other persons or institutions from asserting rights to intellectual property arising out of these relationships. In addition, we cannot assure you that these agreements will not be breached, that we will have adequate remedies for any such breach or that the parties to such agreements will not assert rights to intellectual property arising out of these relationships.

Members of any scientific advisory board we had in the past or may have in the future have been or may be employed by entities other than us, some of which may compete with us. While we intend to enter into non-competition agreements with our scientific advisors, if any of them were to consult with or become employed by any of our competitors, our business could be negatively affected.

We have entered into agreements with various third parties that may affect our intellectual property rights.

We have entered into agreements with various third parties in connection with the development of various applications for our technology. In some instances such agreements provide that a third party will own any resulting intellectual property rights and for the grant of a license to us relating to those rights. We cannot assure you that the terms of any such licenses will not limit our ability to apply such rights to specific applications in competition with the relevant third party, which may adversely affect our business.

Our products employ technology that may unknowingly infringe on the proprietary rights of others, and, as a result, we could become liable for significant damages and suffer other harm.

We cannot assure you that our technologies and products do not or will not infringe on the proprietary rights of third parties or that third parties will not assert infringement claims against us in the future. We are aware of some patents in the nano-materials field held by potential competitors and other third parties. We cannot assure you that a third party will not claim infringement by us with respect to these patents, other patents or proprietary rights, or that we would prevail in any such proceeding. Any such infringement claim, whether meritorious or not, could:

- be time-consuming;
- result in costly litigation or arbitration and the diversion of technical and management personnel, as well as the diversion of financial resources from business operations;
- require us to develop non-infringing technology or seek to enter into royalty or licensing agreements; or
- require us to cease use of any infringing technology.

We may not be successful in developing non-infringing technologies. Royalty or licensing agreements, if required, may not be available on terms acceptable to us, or at all, and could significantly harm our business and operating results. A successful claim of infringement arising from the existence of a 'submarine patent' or another existing patent against us or our failure or inability to license the infringed or similar technology could require us to pay substantial damages and could harm our business. In addition, to the extent we agree to indemnify customers or other third parties against infringement of the intellectual property rights of others, a claim of infringement could disrupt or terminate their ability to use, market or sell our products and we may be liable for the related losses that may incur.

We may not be able to control our warranty exposure, which could increase our expenses.

We currently offer and expect to continue to offer a warranty with respect to our ConsERV<sup>TM</sup> product and we expect to offer a warranty with each of our future product applications. If the cost of warranty claims exceeds any reserves we may establish for such claims, our results of operations and financial condition could be adversely affected.

We may be exposed to lawsuits and other claims if our products malfunction, which could increase our expenses, harm our reputation and prevent us from growing our business.

Any liability for damages resulting from malfunctions of our products could be substantial, increase our expenses and prevent us from growing or continuing our business. Potential customers may rely on our products for critical needs, such as backup power. A malfunction of our products could result in warranty claims or other product liability. In addition, a well-publicized actual or perceived problem could adversely affect the market's perception of our products. This could result in a decline in demand for our products, which would reduce revenue and harm our business. Further, since our products are used in devices that are manufactured by other manufacturers, we may be subject to product liability claims even if our products do not malfunction.

Our key employees are critical to our success and the loss of any key employees could impair our ability to execute our strategy and grow our business.

Our future success depends, to a significant extent, on the continued service of our executive officers and other key technical, sales and senior management personnel and their ability to execute our growth strategy. All of our personnel have non-compete agreements with us however such agreements may not withstand court review if litigation were to occur. The loss of the services of any of our senior level management or other key employees could harm our business. Our future performance will depend, in part, on our ability to retain management personnel and for our executive officers to work together effectively. Our executive officers may not be successful in carrying out their duties or running our business. Any dissent among executive officers could impair our ability to make strategic decisions.

We have, when required, reduced the salaries of our employees. Such salary reductions may have an adverse effect on our ability to retain key employees.

If we fail to attract, retain and motivate qualified employees, we may be unable to execute our business strategy.

Our future success will depend in part on our ability to attract and retain highly qualified individuals, including researchers, engineers, sales and marketing personnel and management. Competition for these individuals may become intense, and it may become increasingly difficult to attract, assimilate and retain these highly qualified persons. Competitors and others may attempt to recruit our employees. Should we experience attrition or need to augment our staff, the cost of securing personnel may be significantly higher than currently experienced and thus negatively impact our financial position.

Our failure to manage our growth could harm our business.

We may grow in the number of our employees, the size of our physical facilities and the scope of our operations. In addition, we intend to focus greater resource on ConsERV<sup>TM</sup> margins, sales/marketing activities and channel expansion, and marketplace education. Any expansion would likely place a significant strain on our senior management team and other internal and external resources. Furthermore, we may be required to hire additional senior management personnel. Our ability to manage growth will depend in part on our ability to continue to enhance our operating, financial and management information systems. Our personnel, systems and controls may be unable to support any growth we may experience and as a result, our financial results would suffer.

Any acquisitions we make could disrupt our business and harm our financial condition.

As part of our growth strategy we may review opportunities to acquire other businesses or technologies that would complement our products, expand the breadth of our target markets or enhance our technical capabilities. Acquisitions entail a number of risks that could materially and adversely affect our business and operating results, including but not limited to:

- problems integrating the acquired operations, technologies or products with our existing businesses and products;
- constraints arising from increased expenses and working capital requirements;
- constraints on our ability to incur debt;
- dilution of our stock if we issue additional securities;
- disruption of our ongoing business, diversion of capital and distraction of our management;
- difficulties in retaining business relationships with suppliers and customers of acquired companies;
- difficulties in coordinating and integrating overall business strategies, sales, marketing, research and development efforts;

- potential liabilities in businesses and facilities acquired;
- difficulties in maintaining corporate cultures, controls, procedures and policies;
- difficulties evaluating risks associated with entering markets in which we lack prior experience; and
- potential loss of key employees.

Our revenue and operating results may fluctuate significantly as a result of factors outside of our control, which could cause the value of our business to decline.

Unless and until we establish a predictable sales record for our products, we expect our revenue and operating results to vary significantly from quarter to quarter. As a result, quarterly comparisons of our financial results are not necessarily meaningful and you should not rely on them as an indication, in any manner, of our future performance. In addition, due to our stage of development, we cannot predict our future revenue or results of operations accurately. As a consequence, our operating results may fall below the expectations of investors, which could cause the valuation of our company to decline.

We expect to make significant investments in all areas of our business, particularly in research and product development and in expanding in-house or outsourced manufacturing capability. Because the investments associated with these activities are relatively fixed in the short-term, we may be unable to adjust our spending quickly enough to offset any unexpected shortfall in our revenue growth. In addition, because we are in the early stages of commercializing the ConsERV<sup>TM</sup> application and anticipate that it will take at least an additional 12 to 36 months to develop our other products for commercial sales, we expect our order flow to be uneven from period to period.

## Risks Related to Our Industry

If our products fail to meet certain technical standards, we could be subject to claims, fines or other penalties and we may be curtailed from conducting our business operations.

Our nano-structured membrane products are designed for specific applications with specific technical objectives and standards. If these membranes, or the hardware device(s) used to make the membranes work, fail to meet those technical objectives and/or standards, we could be liable for potential personal injury, loss of life and damages (including consequential damages). Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred by reason of said claims, including, but not limited to, environmental damage claims, and in certain instances, we may not be reimbursed at all. Our business may be or become subject to numerous federal, state and local laws, regulations and policies that govern environmental protection. These laws and regulations have changed frequently in the past and may continue to do so in the future. Our operations may not comply with such changes and we may be required to make significant unanticipated capital and operating expenditures to comply with such changes. If we fail to comply with any such applicable environmental laws and regulations, governmental authorities may seek to impose fines or other penalties on us or to revoke or deny the issuance or renewal of certain permits issued to us. Accordingly, we might be subject to damage claims or penalties, and we may be curtailed from conducting our business operations.

We could become liable for environmental damages resulting from our research, development and manufacturing operations.

Our business may expose us to the potential risk of harmful substances escaping into the environment, resulting in potential personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in certain instances, we may not be reimbursed at all.

Future government regulation may impair our ability to market and sell our products.

Our current and planned products are potentially subject to federal, state, local and foreign laws and regulations governing, among other things, emissions to air as well as laws relating to occupational health and safety. As these products are introduced commercially, it is possible that governmental authorities will adopt new regulations that will limit or curtail our ability to market and sell such products. We may also incur substantial costs or liabilities in complying with such new governmental regulations. Our potential customers and distributors, some of which operate in highly regulated industries, may also be required to comply with new laws and regulations applicable to products such as ours, which could adversely affect their interest in our products.

Alternatives to our technology could render our systems obsolete prior to commercialization.

Our nano-structured materials and their identified uses are one of a number of products being developed today as potential answers to perceived market needs such as additional water sources, energy and emissions savings with regard to HVAC operation, alternative energy storage and "clean" power sources. Improvements are also being made to existing products. Technological advances in all fields and improvements in key targeted application areas with existing or different new technology may render our nano-structured material approach obsolete before or during commercialization.

Risks Related to This Offering and an Investment in Our Securities

Our common stock has traded only sporadically and is expected to experience significant price and volume volatility in the future which substantially increases the risk of loss to persons owning our common stock.

We cannot predict the extent to which an active public market for our common stock will develop or be sustained. We have applied for listing of our common stock on AMEX, but no assurance can be given that our application will be approved. If the application is not approved, we will not complete this offering or the reverse stock split, and the shares of our common stock will continue to be traded on the OTC Bulletin Board.

Our common stock has been quoted on OTC Market Group Inc.'s OTC Pink Market since November 15, 2005 and the Over the Counter Bulletin Board since November 24, 2008. The market price of our common stock has been and will likely continue to be subject to fluctuations. In addition, the stock market in general and the market for technology companies in particular, have from time to time experienced significant price and volume fluctuations that have been often unrelated or disproportionate to the operating performance of such companies. These broad market and industry factors may cause our common stock to materially decline, regardless of our operating performance. Because of the limited trading market for our common stock, meaning that the number of persons interested in purchasing our common shares at or near bid prices at any given time may be relatively small or non-existent, and the possible price volatility given our status as a relatively small company with a small and thinly traded "float", you may not be able to sell your shares of common stock when you desire to do so. The inability to sell your shares in a rapidly declining market may substantially increase your risk of loss because of such illiquidity and because the price for our common stock may suffer greater declines because of its price volatility.

Volatility in our common share price may subject us to securities litigation.

The market for our common stock is characterized by significant price volatility, and we expect that our share price will continue to be volatile for the indefinite future. In the past, following periods of volatility in the stock market and the market price of a particular company's securities, securities litigation has often been instituted against that company. Litigation of this type could result in substantial legal fees and other costs, potential liabilities and a diversion of management's attention and resources.

We have not and do not intend to pay dividends on our common stock.

The payment of dividends upon our capital stock is solely within the discretion of our board of directors and dependent upon our financial condition, results of operations, capital requirements, restrictions contained in our future financing instruments and any other factors our board of directors may deem relevant. We have never declared or paid a dividend on our common stock and, because we have very limited resources, we do not anticipate declaring or paying any dividends on our common stock in the foreseeable future. Rather, we intend to retain any future

earnings for the continued operation and expansion of our business. It is unlikely, therefore, that the holders of our common stock will have an opportunity to profit from anything other than potential appreciation in the value of our common shares held by them.

Our executive officers and directors have significant shareholdings, which may lead to conflicts with other shareholders over corporate governance matters.

As of October 10, 2011, our directors and officers, as a group, beneficially own approximately 31. 8 % of our outstanding common stock, including shares of common stock issuable upon exercise of warrants and options they hold. Acting together, these shareholders would be able to significantly influence all matters that our shareholders vote upon, including the election of directors, mergers or other business combinations. The consummation of the offering under this prospectus is contingent upon the approval of our application to list our shares on AMEX. We are applying for listing of our common stock on AMEX. We believe that we will satisfy the listing requirements of AMEX. The approval of such listing, however, is not guaranteed. If the application is not approved, we will not complete this offering or the 10-for-1 reverse stock split, and the shares of our common stock will continue to be traded on the OTC Bulletin Board. Even if such listing is approved, we may not be able to meet the requirements for continued listing, and there may not be any broker interested in making a market for our stock. Therefore, it may be difficult to sell your shares of common stock if you desire or need to sell them. It is possible that an active and liquid trading market in our securities may never develop or, if one does develop, that the market will continue.

Unless an active trading market develops for our securities, shareholders may have difficulty or be unable to sell their shares of common stock.

We cannot predict the extent to which an active public market for our common stock will develop or be sustained. It is a condition to the closing of this offering that we be listed on the AMEX but we cannot assure you that we will be able to meet the requirements for continued listing going forward.

Our common stock is currently quoted on the OTC Bulletin Board under the symbol "DLYT." However, currently there is not an active trading market for our common stock, meaning that the number of persons interested in purchasing shares of our common stock at or near ask prices at any given time may be relatively small or non-existent, and there can be no assurance that an active trading market may ever develop or, if developed, that it will be maintained. There are a number of factors that contribute to this situation, including, without limitation, the fact that we are a small development-stage company that is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume, and even if we came to the attention of such persons, they tend to be risk-averse and would be reluctant to follow an unproven, development-stage company such as ours or purchase or recommend the purchase of shares of our common stock until such time we become more seasoned and viable.

As a consequence, our stock may be characterized by a lack of liquidity, sporadic trading, larger spreads between bid and ask quotations, and other conditions that may affect shareholders' ability to re-sell our securities. Moreover, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer which has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. Unless an active trading market for our common stock is developed and maintained, shareholders may be unable to sell their common stock and any attempted sale of such shares may have the effect of lowering the market price of our common stock and a shareholder's investment could be a partial or complete loss.

Since our common stock is thinly traded, it is more susceptible to extreme rises or declines in price and shareholders may not be able to sell their shares at or above the price paid.

Since our common stock is thinly traded, its trading price is likely to be highly volatile and could be subject to extreme fluctuations in response to various factors, many of which are beyond our control, including:

- the trading volume of our shares whether large or small;
- the number of securities analysts, market-makers and brokers following our common stock:
- new products or services introduced or announced by us or our competitors;
- actual or anticipated variations in quarterly operating results;
- conditions or trends in our business industries;
- announcements by us of significant contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;
- additions or departures of key personnel;
- sales of our common stock;
- general stock market price and volume fluctuations of publicly-quoted, and particularly microcap, companies that tend to have products or services in development or have yet to be tested in the market;
- the effect of our 10-for-1 reverse stock split; and
- material legal action.

Shareholders, including but not limited to those who hold shares as a result of the exercise or conversion of our convertible securities and warrants, may have difficulty reselling shares of our common stock, either at or above the price paid, or even at fair market value. The stock markets often experience significant price and volume changes that are not related to the operating performance of individual companies, and because our common stock is thinly traded it is particularly susceptible to such changes. These broad market changes may cause the market price of our common stock to decline regardless of how well we perform as a company. Price fluctuations in such shares are particularly volatile and subject to manipulation by market-makers, short-sellers and option traders.

Our common stock is currently and may in the future be subject to the "penny stock" regulations, which are likely to make it more difficult to sell.

The trading price of our common stock is currently below \$5 per share. Following the completion of our 10-for-1 reverse stock split we anticipate that the trading price of our stock will be adjusted by a factor of ten. If at any time the per-share price of our stock trades below \$5.00 per share, our common stock will be subject to the "penny stock" rules. We anticipate that after the reverse stock split has been effected and our common stock has been listed on a national exchange we will not be subject to the "penny stock" rules, however there is no guarantee we will continue to meet such listing requirements or share prices. The SEC has adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. These rules generally have the result of reducing trading in such stocks, restricting the pool of potential investors for such stocks, and making it more difficult for investors to sell their shares once acquired. Prior to a transaction in a penny stock, a broker-dealer is required to:

• deliver to a prospective investor a standardized risk disclosure document that provides information about penny stocks and the nature and level of risks in the

penny stock market;

- provide the prospective investor with current bid and ask quotations for the penny stock;
- explain to the prospective investor the compensation of the broker-dealer and its salesperson in the transaction;
- provide investors monthly account statements showing the market value of each penny stock held in their account; and
- make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction.

These requirements may have the effect of reducing the level of trading activity in the secondary market for a stock that is subject to the penny stock rules. Since our common stock is subject to the penny stock rules, investors in our common stock may find it more difficult to sell their shares.

Shares eligible for future sale may adversely affect the market.

From time to time, certain of our stockholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, promulgated under the Securities Act, subject to certain limitations. In general, pursuant to Rule 144, non-affiliate stockholders may sell freely after six months subject only to the current public information requirement (which disappears after one year). Affiliates may sell after six months subject to the Rule 144 volume, manner of sale (for equity securities), current public information and notice requirements. Of the 37,517,604 shares (3,751,760 shares upon giving effect to the anticipated 10-for-1 reverse stock split) of our common stock outstanding as of October 10, 2011, approximately 28,689,278 shares (approximately 2,868,928 shares upon giving effect to the anticipated 10-for-1 reverse split) are held by non-affiliates and are, or will be, freely tradable without restriction, and the remaining shares are held by our affiliates, as of such date. Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus (including sales by investors of securities acquired in connection with this offering) may have a material adverse effect on the market price of our common stock.

As of October 10, 2011, the Company has issued options, warrants and convertible securities which could result in the issuance of up to 54,843,666 shares of common stock (approximately 5,484,366 shares upon giving effect to the 10-for-1 reverse stock split) from time to time, consisting of:

- 17,636,090 shares under options (1,763,609 shares after the anticipated 10-for-1 reverse stock split);
- 26,575,332 shares under warrants (2,657,533 shares after the anticipated 10-for-1 reverse stock split); and
- 10,632,244 shares under convertible securities (1,063,224 shares after the anticipated 10-for-1 reverse stock split).

Of these securities, a substantial number of the shares are obtainable at exercise and conversion prices at less than the public offering price of shares offered by this prospectus, including by means of cashless exercise provisions. Accordingly, a substantial number of the shares issuable on exercise or conversion of the securities could be sold by the holders of these securities immediately or promptly after the offering. If these shares are issued and available for sale or actually sold in the public market, the market could be adversely impacted and the market price depressed.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on an assumed offering price of \$4.00 per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$2.94 per share in the net tangible book value of the common stock at June 30, 2011. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

A large number of shares may be sold in the market following this offering, which may depress the market price of our common stock.

A large number of shares may be sold in the market following this offering, which may depress the market price of our common stock. Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. If there are more shares of common stock offered for sale than buyers are willing to purchase, then the market price of our common stock may decline to a market price at which buyers are willing to purchase the offered shares.

Upon completion of this offering and assuming the sale of all 3,750,000 shares of our common stock offered pursuant to this prospectus, the issuance of approximately 481,800 shares of common stock for the conversion of the outstanding convertible notes and the issuance of an estimated 166,971 shares of common stock to our CEO as partial payment of his accrued salary, we will have approximately 8,150,531 shares of

our common stock outstanding after giving effect to the anticipated 10-for-1 reverse stock split.

#### DETERMINATION OF OFFERING PRICE

Although our common stock is currently quoted on the OTC Bulletin Board, we are applying to have our common stock listed for trading on AMEX which we expect to occur prior to the closing of the offering. Our underwriter, MDB Capital Group LLC, is not obligated to make a market in our securities. Neither we nor the underwriter can provide any assurance that an active and liquid trading market in our securities will develop or, if developed, that the market will continue.

The public offering price of the shares offered by this prospectus has been determined by negotiation between us and the underwriter. Among the factors considered in determining the public offering price of the shares were:

- our history and our prospects;
- the industry in which we operate including industry comparable information;
- our past and present operating results;
- our outstanding debt, and the value of the various option grants and warrants at the time of pricing;
- our anticipated 10-for-1 reverse stock split;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares. That price is subject to change as a result of market conditions and other factors, and we cannot assure you that the shares can be resold at or above the public offering price.

#### USE OF PROCEEDS

Based on an assumed offering price of \$4.00 per share (which is the midpoint of our expected offering range of \$3.00 to \$5.00), we estimate the gross proceeds from the sale of 3,750,000 shares of common stock, prior to deducting underwriting discounts and commissions and the estimated offering expenses payable by us, will be approximately \$15.0 million (approximately \$17.3 million if the over-allotment option granted to the underwriter is exercised in full).

We estimate that we will receive net proceeds of \$13.1 million, after deducting underwriting discounts and commissions and estimated expenses of approximately \$1.9 million, which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares. If the underwriter exercises its right to purchase an additional 562,500 shares of common stock to cover over-allotments, we will receive an additional \$2,025,000, after deducting \$225,000 for underwriting discounts and commissions.

We currently intend to use the net proceeds of this offering as shown below:

|  | Application  | Application |
|--|--------------|-------------|
|  | of Net       | of Net      |
|  | Proceeds     | Proceeds    |
| Working Capital and General Corporate Purposes | \$ 3,805,000 | 29.0%       |
| Marketing, Research and Development (1)        | \$ 7,045,000 | 53.8%       |
| Repayment of Convertible Notes (2)             | \$ 1,512,000 | 11.6%       |
| Payment of Employee Accrued Salaries(3)        | \$ 358,000   | 2.7%        |
| Payment of CEO Accrued Salary(4)               | \$ 380,000   | 2.9%        |

| Total | 13,100,000 | 100% |
|-------|------------|------|
|       |            |      |
|       |            |      |
| 27    |            |      |

- (1) Includes proceeds to be applied to a portion of the estimated marketing, research and development costs relating to the commercialization of our ConsERV<sup>TM</sup>, NanoClear<sup>TM</sup>, NanoAir<sup>TM</sup> and ultracapacitor applications as discussed in the section of the prospectus titled "Description of Business". This amount represents a current estimate, and is subject to change depending on various factors discussed below.
- (2) Assumes repayment, by means of a combination of the issuance of conversion shares and repayment in cash, of convertible notes outstanding in the aggregate principal amount of \$2,500,000 plus accrued interest at the rate of 10% per annum, which are held by Platinum Montaur Life Sciences, LLC (Platinum Montaur). The proceeds from these notes were used for working capital, research and development expenses and general corporate purposes. These notes mature on March 22, 2012, and are convertible into common stock at a conversion price of \$2.60 per share (after adjustment for the anticipated 10-for-1 reverse stock split). In addition we anticipate that these notes will be automatically converted upon completion of the offering. These notes are subject to certain limitations on conversion to the extent the shares resulting from such conversion, when aggregated with all other shares of common stock owned by Platinum Montaur at such time, would result in Platinum Montaur holding in excess of 9.99% of all our common stock. Because of these limitations we estimate that as of October 10, 2011 approximately \$1.51 million of net proceeds from the offering will be used to repay principal and interest under these notes, and that approximately 481,800 shares of common stock will be issued in the conversion of the notes.
- (3) Includes payment in the amount of approximately \$348,000 to repay the outstanding accrued salary and expenses of our general counsel, Ms. Patricia Tangredi and approximately \$10,000 to repay the outstanding accrued salary of our Vice President of Sales and Marketing, Mr. David Longacre.
- (4) We have entered into an agreement with our CEO, Tim Tangredi, that provides that upon closing of the offering Mr. Tangredi's accrued compensation through the closing date in the approximate amount of \$1.05 million shall be paid with a combination of (a) cash, which we estimate at this time to be approximately \$380,000, which is intended to cover payment of income and other taxes due from the payment of such accrued compensation, and (b) shares of restricted common stock at a price equal to the price per share paid by investors in the public offering, for the remainder (which is assumed for purposes of the above calculation to be \$4.00 per share after giving effect to the anticipated 10-for-1 reverse stock split, and based on this assumption would consist of approximately 166,971 shares of common stock).

The estimated use of proceeds shown above assumes no exercise of the underwriter's overallotment option. The amounts that will actually be spent by us for any specific purpose may vary significantly, and will depend on a number of factors including but not limited to the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, development and research, market conditions, and changes in or revisions to our marketing strategies. We will have significant discretion in the use of any net proceeds. Investors will be relying on the judgment of our management regarding the application of the proceeds of any sale of our common stock. We may invest the net proceeds temporarily until we use them for their stated purpose.

#### DESCRIPTION OF BUSINESS

Dais Analytic Corporation is a nano-structure polymer technology materials company that has developed and is commercializing applications using its materials. The first commercial product is called ConsERV<sup>TM</sup>, a fixed plate energy recovery ventilator which we believe is useful in meeting building indoor fresh air requirements while saving energy and lowering emissions for most forms of Heating, Ventilation and Air Conditioning (HVAC) equipment. We are developing other nano-structure polymer technology applications including (i) "NanoAirTM", a water based packaged heating and cooling system and (ii) "NanoClearTM", a water purification process useful in the creation of potable water from salt, brackish or waste water. We further believe that our nano-structure polymer technology may be useful in developing an ultra-capacitor, a device that may be capable of greater energy density and power per pound than traditional capacitors or batteries.

#### Corporate History

We were incorporated as a New York corporation on April 8, 1993 as Dais Corporation. We subsequently changed our name to Dais Analytic Corporation on December 13, 1999. We were formed to develop new, cost-effective polymer materials for various applications, including providing a lower cost membrane material for Polymer Electrolyte Membrane (PEM) fuel cells. We believe our research on materials science has yielded technological advances in the field of selective ion transport polymer materials.

In December 1999, we purchased the assets of Analytic Power Corporation, which was founded in 1984 to provide fuel cell and fuel processor design and consulting services, systems integration and analysis services to develop integrated fuel cell power systems, and we were re-named Dais Analytic Corporation. Analytic Power Corporation developed a portfolio of fuel cell and related fuel cell component technologies, including fuel cell stack designs, a membrane electrode assembly process, and natural gas, propane, diesel and ammonia fuel processors for use in creating integrated fuel cell systems.

In March 2002, we sold substantially all of our fuel cell assets to a large U.S. oil company for a combination of cash and the assumption by such company of certain of our obligations. After we sold a substantial portion of our fuel cell assets, we focused on expanding our nano-structured polymer platform, having already identified the Energy Recovery Ventilator (ERV) application as our first commercial product.

#### Technology

We reformulate thermoplastic materials called polymers to produce a nano material. Nano-technology involves studying and working with matter on an ultra-small scale. One nanometer is one-millionth of a millimeter and a single human hair is around 80,000 nanometers in width. Polymers are chemical, plastic-like compounds used in diverse products such as Dacron, Teflon, and polyurethane. A thermoplastic is a material that is plastic or deformable, melts to a liquid when heated and to a brittle, glassy state when cooled sufficiently.

These reformulated polymers have properties that allow them to be used in unique ways. We transform polymers from a hard, water impermeable substance into a material which water and similar liquids can, under certain conditions, diffuse (although there are no openings in the material) as molecules as opposed to liquid water. Water and similar liquids penetrate the thermoplastic material at the molecular level without oxygen and other atmospheric gases penetrating the material. It is believed this selectivity is dependent on the size and type of a particular molecule.

**Products** 

ConsERVTM

We currently have commercialized the ConsERV<sup>TM</sup> product. ConsERV<sup>TM</sup> is an Energy Recovery Ventilation product useful in most forms of HVAC as a way to meet building ventilation code(s), save energy (after reviewing the results of various third party tests, we believe ConsERV<sup>TM</sup> saves between 10% and 57% of the operating costs of providing HVAC ventilation air), lower CO2 emissions, allow HVAC equipment to be up to 30% smaller, reduce peak energy usage by up to 20% all while simultaneously improving indoor air quality. ConsERV<sup>TM</sup> attaches onto existing HVAC systems to provide ventilation within the structure. It pre-conditions the incoming air by flowing that air on one side of our material while stale, exhaust air from the building flows over the other side of the same material. The Dais material acts akin to a 'temperature and moisture 'filter' by transferring excess heat and moisture bi-directionally based on the temperature and moisture content of the two air streams. Many layers of our material are stacked and placed in what is called a 'core'. As a summer time example the "core" removes some of the heat and humidity from the incoming air, transferring it to the exhaust air stream thereby, under certain conditions, saving energy. For winter heating, the "core" transfers a portion of the heat and humidity into the incoming air from the exhaust air stream thereby often saving energy.

Our ConsERV<sup>TM</sup> product is the primary focus of our resources and commercialization efforts. When compared to similar competitive products, we believe based on test results conducted by the Air-Conditioning, Heating and Refrigeration Institute (AHRI)1, a leading industry association, ConsERV<sup>TM</sup> is twice as effective in managing the combination of latent and sensible heat. We expect ConsERV<sup>TM</sup> to continue to be the commercial product of focus through 2011, with a growing emphasis on moving components of NanoAir<sup>TM</sup> technologies towards commercialization.

<sup>1</sup> Air-Conditioning, Heating, and Refrigeration Institute (AHRI) – May 2008 test results. This study is publicly available and was not prepared for our benefit or funded by us.

#### How ConsERV<sup>TM</sup> Works

Most building codes mandate commercial structures to provide certain levels of ventilation determined by use and occupancy. ERVs are systems used by HVAC manufacturers to increase energy efficiencies in HVAC units by transferring heat and humidity between air flows. They do this by capturing a portion of the energy already used to heat or cool air that is being released to the outside and use such released air to condition the incoming air stream. In an air conditioning application, heat and humidity that are part of the incoming air stream are transferred to the cool, dry exhaust air, thereby "pre-conditioning" the incoming air before it reaches the building's air conditioning system. By pre-conditioning the incoming air, ERVs should increase the operating efficiency of the HVAC unit, thereby lowering the overall costs associated with heating and cooling buildings and potentially reducing the size and initial capital cost of the overall HVAC unit.

ConsERV<sup>TM</sup> has a "core" component made using our nano-structured material and may be described as a high-performance ERV. It is used in conjunction with a building's HVAC equipment. The ConsERV<sup>TM</sup> energy recovery ventilator employs nano-technology based materials to create an exchange of sensible (temperature) and latent (humidity) energy between the two air streams using HVAC equipment to provide building ventilation. The first air stream typically exits a building at the temperature and relative humidity level set by the buildings' air conditioning and heating equipment. The second air stream comes from the outside environment at a different temperature and relative humidity level and is used to bring outdoor air to the occupants of the building. The ConsERV<sup>TM</sup> product uses the energy found in the first air stream (air already cooler or heated) to condition the second air stream (the outdoor air coming in) before the second air stream (outside air) enters the HVAC equipment. The ConsERV<sup>TM</sup> product may save energy, in that it often reduces the required energy and size of the HVAC equipment and thereby may lower the cost of providing ventilation. In addition, it may lower carbon dioxide emissions because the HVAC equipment may not need to be used as frequently and often times can be reduced in size to provide the same levels of comfort indoors. The process is shown in the picture below.

Given third-party test data, our ConsERV<sup>TM</sup> product, with its Aqualyte<sup>TM</sup> Core, offers better total performance than other fixed plate ERV products of which we are aware, with no moving parts and little or no cross-air stream contamination1. Our ConsERV<sup>TM</sup> core product has received UL 900 recognition and Air-Conditioning, Heating and Refrigeration Institute ("AHRI") standard 1060 certification. Our ConsERV<sup>TM</sup> product is compatible with most commercial HVAC units and requires only a small amount of additional HVAC technical expertise to install. We believe the purchase and installation costs of our ConsERV<sup>TM</sup> product are comparable to the costs of many competing energy recovery products and our ConsERV<sup>TM</sup> product is more efficient in transferring moisture with lower life cycle maintenance costs.

Achieving increased sales revenue growth from our ConsERV<sup>TM</sup> product is predicated on the success in seven key areas:

- Achieving continued engineering or technological improvements in key materials to lower our 'per unit' cost structure.
- Recruiting and retaining the necessary people and infrastructure to support sales
  growth of ConsERV<sup>TM</sup> and other products as they are introduced into their respective
  sales channels.
- Engineering of add-on components (such as coils, heaters, dampers, new fan options and controls) to ConsERV<sup>TM</sup> systems to meet market demands.
- Development of new core designs to meet broad spectrum of performance needs.
- Continuing to implement 'Lean Manufacturing' techniques for in-house assembly processes as well as monitoring existing outsourced manufacturing and assembly relationships that lower our 'per unit' cost structure.
- Securing additional depth in the sales channels including adding more independent sales representatives, supplying HVAC equipment manufacturers, as well as ERV Original Equipment Manufacturers ("OEM") (or licensees), securing key international sales channels seeking license opportunities for other consumer uses.
- Having access to sufficient working capital in a timely manner for the necessary steps outlined above to continue without interruption.

We are devoting varying amounts of time to other uses of our nano-structured products in ways which are not disruptive to the key ConsERV<sup>TM</sup> effort. To date, small revenues have been generated from these non-ConsERV<sup>TM</sup> related applications.

<sup>1</sup> Air-Conditioning, Heating, and Refrigeration Institute (AHRI) – May 2008 test results. This study is publicly available and was not prepared for our benefit or funded by us.

These product applications and activities include:

NanoAir TM

Water Based packaged HVAC system or "NanoAir<sup>TM</sup>": We expect this application would function to dehumidify and cool air in warm weather, or humidify and heat in cold weather. This NanoAir<sup>TM</sup> application may be capable of replacing a traditional refrigerant loop based heating/cooling system. We have several small prototypes showing fundamental heating, cooling, humidification, and dehumidification operation of this evolving product. The NanoAir<sup>TM</sup> product is in the early beta stage of prototype development. We received a grant of \$681,322 from the US Department of Energy's Advanced Research Projects Agency – Energy (ARPAE) in September of 2010, and a grant of \$254,500 from Pasco County, Florida in December of 2010. Both grants are designed to assist us to get the NanoAir<sup>TM</sup> family of products into commercialization.

#### NanoClear TM

Water Clean-up: We expect that our NanoClear<sup>TM</sup> application would function to remove quantities of salt and other impurities from water to produce potable water using an environmentally friendly design that would use less energy and be less expensive than most other current methods. We have developed a series of functional demonstration units which highlight the basics of how this system works using the Company's nano-structured materials to produce potable water from a number of types of contaminated input water (contaminated) to the NanoClear<sup>TM</sup> process. The information accumulated from the demonstration units is being used as the basis for the product's next planned inflexion point: the buildup of a 10 cubic meter (approximately 26,500 gallons of clean water per day) pilot plant projected to be set up at a local County waste water treatment facility. The NanoClear<sup>TM</sup> product is currently in the early beta stage development where it is to undergo further testing and scaling.

NanoCap TM

Ultra-capacitor: Based on initial material tests conducted by two third parties, we believe that by applying a combination of our nano-materials we may be able to construct a device which stores energy similar to a battery with projected increases in energy density and lifetimes. We believe the key application for such a device would be in transportation. We have not invested significant resources to date in the development of this product.

Detailed information including development stage and estimated funding and time to market follows:

| Application  | Current Stage   | Co | Estimated<br>Funding<br>Required<br>ommercialize | Estimated Time to Market (post funding)(1) |  |  |
|--|---|----|--|--|--|--|
| Energy Recovery Ventilation (ConsERVTM) – An energy efficient process that exchanges heat and humidity between incoming and outgoing airstreams to increase fresh air within commercial and residential facilities | Varied - Additional<br>components to meet<br>market demand are<br>necessary | \$ | 1.5 Million                                      | Commercial                                 |  |  |
| Water Clean – up (NanoClearTM) – A process using a low temperature, low pressure approach to process brackish, salt, and waste water into potable water.   | 1st Stage Beta  | \$ | 3.8 Million                                      | 12 – 36 months                             |  |  |
|  | 1st Stage Beta  | \$ | 3.8 Million                                      | 12 - 36 months                             |  |  |

Advanced Heating, Ventilating, and Air Conditioning (NanoAir) - A process using the nano - technology materials to create an advanced heating, ventilating, and air - conditioning system. Ultracapacitor – if fully developed, may have a Base materials testing \$ 500,000 greater energy density and power per pound than underway by third party to traditional capacitors or the batteries on the confirm the effectiveness of the Company's materials market today. in the application. Current activities are moving us

closer to the optimization of materials.

Estimated time to market (post funding) for the Ultracapacitor cannot be determined at this time because it is subject to completion of materials testing.

We have identified other potential products for our materials and processes as well as accumulating basic data to support the needed functionality and market differentiation of these products based on using our nano-technology based inventions. Such applications may include immersion coatings and performance fabrics. These other products are based, in part, upon the known functionality of the Company's materials and processes.

#### Patents

We own eight U.S. patents, two pending U.S. patent applications, and four Patent Cooperation Treaty ("PCT") applications. National stage applications based on one of the PCT application have been filed in the U.S., China, Hong Kong and Europe. In addition, we co-own two PCT applications with Aegis Biosciences LLC, a biomaterials drug delivery technology company. National stage applications based on one of the co-owned PCT applications have been filed in the U.S., China, Hong Kong and Europe, and a National stage application based on the other co-owned PCT application has been filed in the U.S. and China. These patents relate to, or are applications of, our nano-structured polymer materials that perform functions such as ion exchange and modification of surface properties. The polymers are selectively permeable to polar materials, such as water, in molecular form. Selective permeability allows these materials to function as a nano-filter in various transfer applications. These materials are made from base polymer resins available from a number of commercial firms worldwide and possess what we believe to be some unique and controllable properties, such as:

- Selectivity: Based on our research, we believe that when the polymer is made there are small channels created that are 5 to 30 nanometers in diameter. There are two types of these channels: hydrophilic (water permeable), and hydrophobic (water impermeable). The channels can be chemically tuned to be selective for the ions or molecules they transfer. The selectivity of the polymer can be adjusted to efficiently transfer water molecules from one face to the other using these channels.
- High transfer rate: Based on in-house testing protocols and related results, we have found that the channels created when casting the materials into a nano-structured membrane have a transfer rate of water, or flux, greater than 90% of an equivalent area of an open tube. This feature is fundamental to the material's ability to transfer moisture at the molecular level while substantially allowing or disallowing the transfer of certain other substances at a molecular level.
- Unique surface characteristics: The materials offer surface characteristics that we
  believe inhibit the growth of bacteria, fungus and algae and prevent adhesives from
  attaching.

The molecular selectivity, transfer rate and surface coating properties, coupled with our ability to produce the nano-structured materials at what we believe is an affordable price, distinguishes our technology and value-added products. By incorporating our nano-structured materials into existing products, we strive to address current real-world market needs by offering what we believe to be higher efficiencies and improved price performance. For example, there are other energy recovery mechanisms available for HVAC that use coated paper or desiccant technology instead of our highly efficient nano-structured polymer materials.

#### Manufacturing

We do not have long term contractual relationships with any of our manufacturers or vendors. The only product or service which we could not have purchased elsewhere and used in the on-going growth of the ConsERV<sup>TM</sup> business is the plastic based sheet good. In progress is a project aimed at lessening the Company's exposure in this sheet good area. All purchases to date of raw materials and related services have been on a purchase order basis. Our manufacturing process is described below.

#### Polymer Material

Commercially available polymer resin in flake form and industrial grade solvents are mixed together using a proprietary process involving heat, industrial mixers, and solvents. The resin and the solvents are commercially available from any number of chemical supply houses, or firms such as Dow and Kraton (formerly Shell Elastomers then part of Royal Dutch Shell). Our process changes the molecular properties of the starting polymer resins into a liquid material which we believe gives the attribute of being selective in what molecules it will allow through the plastic, which includes water molecules. This process, called 'sulfonation', is done at facilities around the world known as Toll Houses. These are firms which specialize in making small lot (by industry standards) runs of specialty chemicals.

#### Plastic Based Sheet Good

A thin coating of the liquid polymer material is applied on one side of the sheet good by a 'tape casting' firm of which there are many in the United States. The coated sheet good is heated to rapidly dry the liquid material thus bonding the polymer solution and rolled sheet good together. The resulting 'modified sheet good' is then re-coiled into rolls and shipped to us. Currently one vendor provides this to us. We have not sought additional vendors for this component. However, we have identified other entities making similar types of products and believe such entities and products may provide alternatives should one be required. As noted above we are actively working on this project to lower our exposure.

### The "Core"

The modified sheet good is cut into defined dimensions and glued to a PVC formed spacer. This 'spacer/glued modified sheet good' is a single layer. Multiple layers are stacked one on top the other until a certain height is achieved. Once the proper height is achieved, these layers are then fitted with a galvanized sheet metal plate on the top and bottom of the stack along with galvanized sheet metal 'Y' shaped bracket on each of the four corners of the assembly. This assembly is called a 'core'. The galvanized sheet metal is a world-wide commodity material formed to our specifications by local and out-of-town sheet metal forming companies. We have no long term contractual relationships with firms making the PVC spacers, supplying the glue, supplying rivets to hold the structure together, and the sheet metal firms making the top and bottom plate as well as the side rails.

#### Completion

For the complete ConsERV<sup>TM</sup> system, one or more cores are placed inside of aluminum or steel boxes built by a vendor or us. The box may or may not also be fitted with an electric motor, fan, electric relay, and electrical disconnect. Inclusion or exclusion of the electric motor and fan is dictated by the customers' needs and current HVAC system. Once outfitted with cores, the product is complete. We have no long term contractual relationships with firms providing the aluminum or steel parts used to build the box, the motors, the fans, the relays, or the electrical disconnects.

#### Licensing

While we have earned licensing revenue under agreements licensing our technology in the past, we may not receive any material revenue from these agreements in the near or foreseeable future.

#### Research and Development

We have spent approximately \$338,000 (gross) and \$6,600 on research and development during the years ended December 31, 2010 and 2009, respectively. During the year ended December 31, 2010, we received \$99,000 to offset the cost of research and development expenses as it relates to a project that is funded by grants from Pasco County and the Department of Energy, American Economic Investment and Recovery Act. For the six months ended June 30, 2011, the Company incurred research and development costs of approximately \$300,600 and recognized approximately \$287,500 in grant proceeds.

### Key Relationships

We have strategic relationships with leaders in the energy industry who have entered into sales, marketing, distribution and product development arrangements with us and, in some cases, hold equity in us. They include:

#### Trane Corporation

On August 12, 2010, we entered into an Independent Sales Representative Agreement with Trane U.S. Inc. ("Trane"). Under the terms of the agreement, Trane agreed to act as exclusive independent sales representative to offer for sale and sell ConsERV<sup>TM</sup> products, including the cores and/or the systems ("Products") in over 20 areas within the United States, with additional territories to be added by mutual agreement of the parties. We retain the right to offer for sale and sell and permit third parties to offer for sale and sell any ConsERV<sup>TM</sup> product within the territory under private label arrangements. In addition, we may sell Products to certain national accounts and sell any component of the Products without limitation. Sales of other fixed plate energy recovery ventilator products by Trane are not to be made within the territory. Products are purchased by Trane and delivered F.O.B. our factory. Trane is to pay us the established purchase price for all Products ordered and received at any time under this agreement. Product prices may change upon advance notice by us. We provide a two year warranty on the Products and a 10 year warranty on the core component with the warranty applying, subject to additional terms and conditions, to defects in any Product resulting from improper workmanship and/or materials provided the Product was subject to normal use and properly installed. We may under certain conditions be subject to liquidated damages for orders accepted and not delivered on a timely basis, however, such damages are not exceed the purchase price of the Product on which delivery was delayed or apply if such delay was due to a force majeure. The agreement may be terminated by either party upon 90 days prior written notice or immediately in certain situations, for instance if either party become insolvent, cease to function as a going business, file a petition in bankruptcy. If we terminate the contract and the basis for termination is not a breach of this agreement by Trane, we shall fill all orders place

#### Electric Power Research Institute (EPRI)

We have an on-going relationship with a number of utilities through EPRI. The EPRI participants include Public Service Company of New Mexico, Kansas City Power & Light, Reliant Energy Incorporated, Alliant Energy Company, Omaha Public Power District, Wisconsin Public Service Corporation, Southern California Gas Company, EDF Electricite de France, Consolidated Edison of New York, Tokyo Gas Co., Ltd., CINERGY Corporation, Northern States Power Company, American Electric Power Company, Inc., Sierra Pacific Power Company, Public Service Electric & Gas Company (PSE&G), and Tennessee Valley Authority. The EPRI users group has been helpful in creating opportunities for us to define specifications and applications for our nano-structured materials that address existing energy related challenges while possibly opening new sources of revenue.

Genertec America, Inc ("Genertec").

On August 21, 2009, we entered into an Exclusive Distribution Agreement with Genertec, under which we are to supply and Genertec is to distribute, on an exclusive basis, three of our nanotechnology-based membrane products and related products in Greater China, including mainland China, Hong Kong, Macau and Taiwan. The agreement provides that during the initial term of the agreement, Genertec will order and purchase these products in the aggregate amount of \$200 million. A minimum quantity of said products is to be purchased by Genertec during each contract year of the initial term. In the event Genertec fails to purchase the minimum amount of products in any given year, we may convert the exclusivity provided to Genertec to a non-exclusive or terminate the agreement. Genertec has agreed to engage and appoint authorized person(s) or firm(s), to install, engineer, perform maintenance, sell and use the products within the defined distribution area and neither Genertec nor its designated buyer is permitted to alter, decompile or modify our products in any way. As consideration for entering into this agreement, Genertec agreed to pay us a deposit in monthly installments beginning in September 2009 and continuing through April, 2010. All such payments are to be applied to products purchased by Genertec. During the initial term of the agreement, the parties are to negotiate in good faith a royalty bearing license agreement whereby Genertec may be granted a license to manufacture certain portions of the our products in the designated territory. The initial term of the agreement shall be for a period of five (5) years, commencing on August 21, 2009, unless earlier terminated. Unless notice of termination is delivered to the respective parties 180 days prior to the expiration of the initial term, the Agreement will automatically renew for consecutive one year periods. We may terminate this agreement in the event: (1) Genertec fails to pay the deposit as indicated, (2) Genertec does not purchase the minimum amount of our designated products during any contract year, (3) breach by Genertec of its obligations under the Agreement, or (4) at our discretion immediately upon the transfer of fifty percent (50%) or more of either the assets of the voting stock of Genertec to any third party. Genertec may not assign the Agreement to any party without our prior written consent. As of June 30, 2011, the Company has \$406,356 in accounts receivable and \$500,000 in deferred revenue to be applied against future orders. Genertec America's partners in China have received the product and are continuing to perform tests; however there have been delays in completing this testing process. As a result, Genertec America has not yet begun to order product from the Company under this Agreement. The Company is currently meeting with Genertec to resolve the payment of the receivable and expects that the amounts will be collected.

In April of 2010, the Company entered into a technical and sales agreement with CAST Systems Control Technology Co., Ltd. ("CAST") and Genertec with a value of up to approximately \$48 million over a twelve month period. Under the terms of the Agreement, the Company will supply to CAST, through Genertec, key system components of its nanotechnology clean water process. The Agreement is conditioned upon the Company obtaining a letter of credit from GTA in the amount as agreed to by the parties on or before April 13, 2010. As of the date of this filing, the Company has received the required letter of credit. This Agreement, the terms of which are disclosed in the Company's Current Report on Form 8-K, filed on April 9, 2010, is made pursuant to and in support of the \$200 million distribution agreement made between the Company and Genertec on August 21, 2009, granting Genertec the exclusive right to obtain, distribute and market the Company's nanotechnology-based membrane and related products in China, including mainland China, Hong Kong, Macau and Taiwan, the terms of which are summarized above and more fully disclosed in the Company's Current Report on Form 8-K, filed August 27, 2009. For the year ended December 31, 2010, we have sold one unit under this agreement and recognized \$300,000 in revenue which has been billed and \$254,000 of which has been collected. We expect the remainder of the \$300,000 receivable to be collected in 2011.

#### ConsERVTM - Sales and Marketing Strategies

We market our ConsERV<sup>TM</sup> product in North America principally through alliances with local independent manufacturer representatives. We currently have approximately 60 independent commercial sales representatives in various locations throughout North America selling the ConsERV<sup>TM</sup> product. We intend to increase the number of commercial independent sales representatives to more than 100 by the end of 2012, to properly cover the North American commercial sales territory. We are also working to secure ongoing relationships with other leading industry HVAC manufacturers and other ERV manufacturers. Other potential and targeted sales channels for the ConsERV<sup>TM</sup> product are energy service companies and HVAC product distributorships. We continue to leverage our relationship with Trane Corporation, EPRI and a group of 16 utility companies (consisting of EPRI members and some of our minority shareholders) into expected sources of future product sales through the introduction of demand reduction incentives. As interest has grown in ConsERV<sup>TM</sup> – and growth begins in NanoAirTM – we decided to bring in an HVAC industry veteran to oversee the sales and marketing of ConsERV<sup>TM</sup> as well as to prepare to integrate the NanoAirTM applications as they come available for commercialization. In January 2010, we hired a new Vice President of Sales and Marketing who possesses 25 years of experience in the HVAC industry. Additionally this growth found our manufacturing efforts in need of bolstering. In June 2010 we hired a General Manager of Operations and Manufacturing, who is LEAN certified, and has over 18 years of experience in growing, running and optimizing manufacturing organizations, to run the manufacturing effort and to plan for our projected future manufacturing and assembly expansion.

#### Future Products - Sales and Marketing Strategies

Our intended sales and marketing strategy will require us to create alliances with companies having strong, existing channel presence in the target industries. We intend to bring industry seasoned executive talent into the company at the appropriate time to influence the product's feature set, and to then to develop the market for and produce revenue from the NanoAir<sup>TM</sup> and NanoClear<sup>TM</sup> products. We believe working with OEM's who are industry leaders during development allows us to better address the market's needs and possibly accelerate the time to market cycle.

#### Competition and Barriers to Entry

We believe the efficacy of our value-added products and technology has the ability to decrease sales of competing products, thus taking business away from more established firms using older technology. We believe that our ConsERV<sup>TM</sup> product may become a functional component of newer, more efficient OEM products. Our key challenge is to educate channel decision makers of the benefits of products made using our materials and processes to overcome the strength of the current product sales.

There are a number of companies located in the United States, Canada, Europe and Asia that have been developing and selling technologies and products in the energy recovery industry, including but not limited to: Semco, Greenheck, Venmar, Bry-Air, dPoint, Renewaire and AirXchange.

We will experience significant competition regarding our products because certain competing companies possess greater financial and personal resources than us. Future product competitors include, but are not limited to:

Products Current and Future Competitors

ConsERV<sup>TM</sup> Semco, Greenheck, Venmar, Bry-Air, dPoint, Renewaire and AirXchange.

NanoClear<sup>TM</sup> Dow, Siemens, GE

NanoAir<sup>TM</sup> AAON, Trane, Carrier, York, Hier, Mitsubishi, LG

Ultracapacitor Maxwell, Ioxus, B&D

We believe that the combination of our nano-material platform's characteristics (high selectivity, high flux rate, manufacturability, et al.), growing patent position, and possible 'first to market' position, are competitive advantages, which may allow us time to execute our business plan. Competitors may experience barriers to entry in these markets primarily related to the lack of similarly performing proprietary materials and processes.

#### Intellectual Property

As stated above, we have eight U.S. patents, including patents covering the composition and structure of a family of ion conducting polymers and membranes and applications of the polymer. We believe some of these patents make reference to applications relating to the materials we are developing. Please see the "Risk Factors" Section of this prospectus. A list of our existing patents follows:

- 1. Patent No. 6,841,601– Cross-linked polymer electrolyte membranes for heat and moisture exchange devices. This patent was issued on January 11, 2005 and expires on or about March 12, 2022.
- 2. Patent No. 6,413,298 Water and ion-conducting membranes and uses thereof. This patent was issued on July 2, 2002 and expires on or about July 27, 2020.
- 3. Patent No. 6,383,391 Water and ion-conducting membranes and uses thereof. This patent was issued on May 7, 2002 and expires on or about July 27, 2020.
- 4. Patent No. 6,110,616 Ion-conducting membrane for fuel cell. This patent was issued on August 29, 2000 and expires on or about January 29, 2018.
- 5. Patent No. 5,679,482 Fuel Cell incorporating novel ion-conducting membrane. This patent was issued on October 21, 1997 and expires on or about October 20, 2014.
- 6. Patent No. 5,468,574 Fuel Cell incorporating novel ion-conducting membrane. This patent was issued on October 21, 1995 and expires on or about May 22, 2014.
- 7. Patent No. 7,179,860 Cross-linked polymer electrolyte membranes for heat, ion and moisture exchange devices. This patent was issued on February 20, 2007 and expires on or about March 11, 2022.
- 8. Patent No. 7,990,679 Nanoparticle Ultra Capacitor. This patent was issued on August 2, 2011 and expires on or about December 10, 2028.

We have provisional and patent applications in the following areas: Advanced Polymer Synthesis Processes, Reversible Liquid to Air Enthalpy Core Applications and Construction, and Water Treatment and Desalination.

The following is a partial list of the patent applications publicly visible:

- 1. WO/2008/039779 Enhanced HVAC System and Method
- 2. WO/2008/089484 Multiphase selective Transport Through a Membrane
- 3. WO/2008/141179 Molecule Sulphonation Process \*
- 4. WO/2009/002984 Stable and Compatible Polymer Blends\*
- 5. WO2009/002984 Novel Coblock Polymers and Methods for Making Same

<sup>\*</sup> Patent applications jointly owned with Aegis Biosciences, LLC.

Patents may or may not be granted on these applications. As noted above, some of these applications are jointly owned with Aegis Biosciences, LLC. We also seek to protect our proprietary intellectual property, including intellectual property that may not be patented or patentable, in part by entering into confidentiality agreements with our current and prospective strategic partners and employees.

Government Regulation

We do not believe the sale, installation or use of our current nano-structured products will be subject to any government regulation, other than perhaps adherence to building codes, and water safety regulations. We do not believe that the cost of complying with such codes and regulations, to the extent applicable to our products, will be prohibitive.

We do not know the extent to which any existing or new regulations may affect our ability to distribute, install and service any of our products. Once our products reach the commercialization stage and we begin distributing them to our target markets, federal, state or local governmental entities may seek to impose regulations.

We are also subject to various international, federal, state and local laws and regulations relating to, among other things, land use, safe working conditions, and environmental regulations regarding handling and disposal of hazardous and potentially hazardous substances and emissions of pollutants into the atmosphere. Our business may expose us to the risk of harmful substances escaping into the environment, resulting in potential personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in some instances, we may not be reimbursed at all. To date, we are not aware of any claims or liabilities under these existing laws and regulations that would materially affect our results of operations or financial condition.

As of October 10, 2011, we employed 22 full-time employees and three part time employees in our Odessa, Florida facility. Of the 25 employees we have 8 technicians, 2 product managers, a polymer chemist, a polymer engineer, 5 engineers, a Chief Technology Officer Development, a General Manager of Operations, 1 administrative assistant, 2 administrators, a Vice President of Sales, a Chief Financial Officer and a President and Chief Executive Officer. None of the employees are subject to a collective bargaining agreement. We consider our relations with our employees to be good.

Principal Offices

Our principal office is located at 11552 Prosperous Drive, Odessa, FL 33556.

#### **PROPERTIES**

We currently lease 7,200 square feet of combined office and production space located at 11552 Prosperous Drive, Odessa, FL 33556. We lease the site from Ethos Business Ventures, LLC, a limited liability company in which our Chief Executive Officer, Timothy N. Tangredi, has a controlling financial interest.

The lease for our corporate headquarters began on March 18, 2005. The lease term will terminate upon 30 days' written notice from landlord or 90 days written termination from us. The current monthly rent is \$3,800. At June 20, 2011, we owed \$45,779 to the landlord for rent due. We also pay all taxes, insurance and utilities as well as most repairs relating to our office. Most of the Company functions are performed at this site including corporate, marketing, administration, on-going product and nano-structured polymer development, and product assembly and shipping. Key polymer synthesis and casting is out-sourced and not done at this facility. Management will consider moving the synthesis and casting activities in-house with use of proceeds from this offering.

We do not anticipate investing in real estate or interests in real estate, real estate mortgages, or securities of or interests in persons primarily engaged in real estate activities. We currently have no formal investment policy and do not intend to undertake investments in real estate as a part of our normal operations.

#### LEGAL PROCEEDINGS

We are not currently a party to any pending legal proceedings. In the ordinary course of business, we may become a party to various legal proceedings generally involving contractual matters, infringement actions, product liability claims and other matters.

From time to time, claims are made against us in the ordinary course of our business, which could result in litigation. Claims and associated litigation are subject to inherent uncertainties and unfavorable outcomes could occur, such as monetary damages, fines, penalties or injunctions prohibiting us from selling one or more products or engaging in other activities. The occurrence of an unfavorable outcome in any specific period could have a material adverse effect on our results of operations for that period or future periods.

#### DIRECTORS, EXECUTIVE OFFICERS, PROMOTERS AND CONTROL PERSONS

The following table sets forth the names and ages of all of our directors and executive officers as of October 10, 2011. Also provided herein is a brief description of the business experience of each director and executive officer during the past five years and an indication of directorships held by each director in other companies subject to the reporting requirements under the Federal securities laws. All of the directors will serve until the next annual meeting of shareholders and until their successors are elected and qualified, or until their earlier death, retirement, resignation or removal. There are no arrangements or understandings between any director or executive officer and any other person pursuant to which the director or executive officer was selected.

| Name                 | Age | Position                               |
|----------------------|-----|--|
|                      |     | President, Chief Executive Officer and |
| Timothy N. Tangredi  | 55  | Chairman of the Board of Directors     |
| Scott G. Ehrenberg   | 57  | Chief Technology Officer and Secretary |
| Judith C. Norstrud   | 42  | Chief Financial Officer and Treasurer  |
| David Longacre       | 52  | Vice President – Sales and Marketing   |
| Robert W. Schwartz   | 66  | Director                               |
| Raymond Kazyaka, Sr. | 75  | Director                               |
|                      |     |  |

**Directors and Executive Officers** 

Biographical information with respect to our executive officers and directors is provided below. There are no family relationships between any of our executive officers or directors.

Timothy N. Tangredi has been our Chief Executive Officer since 1996. Mr. Tangredi joined the Company in 1996, and was appointed a member of our board of directors in 1997. In 1999 and 2000, respectively, Mr. Tangredi initiated and executed the strategic purchases of the assets of Analytic Power and American Fuel Cell Corporation. From 1979 to 1990, Mr. Tangredi worked for AT&T, as a member of the Leadership Continuity Program working in technical marketing, network operations, and project management.

Mr. Tangredi earned his BS from Siena College and an MBA from Rensselaer Polytechnic Institute. He is a founder and member of the board of directors of Aegis BioSciences, LLC ("Aegis"). Aegis, created in 1995, is a licensee of the Company's nano-structured intellectual property and materials in the biomedical and healthcare fields. Mr. Tangredi spends approximately one to two days per month on Aegis business and is compensated by Aegis for his time and contributions.

Mr. Tangredi's experience in nanotechnology, strategic planning and leadership skills makes him highly qualified to be a member of our board. He has a comprehensive understanding of our company and management, operations, financial requirements and technologies.

Scott G. Ehrenberg, is a founder of the Company and has been our Chief Technology Officer since 1993 and Secretary since November 7, 2008. He has thirty years of experience developing along with others new materials and applications. These applications range from laser cutting systems, optical inspection technology, and new organic electronic packages for IBM to new polymer electrolytes for electrochemical and mass transport devices for the Company. His background includes 12 years at IBM plus two previous startups in the fields of electronic packaging and ultrasonic devices: one firm which ultimately became Tessera of San Jose, CA and the other which ultimately became Sono-Tek of Milton, NY. He has 15 issued patents with 5 more pending along with numerous technical papers and presentations. Mr. Ehrenberg received his bachelor of science from Pennsylvania State University in 1976.

Judith C. Norstrud, CPA was appointed Chief Financial Officer and Treasurer on October 14, 2009. In March 2002, Ms. Norstrud founded Norco Accounting & Consulting, Inc., a firm that provides various accounting and consulting services to small companies on an as needed basis. She continues her consulting work with Norco Accounting & Consulting concurrently with her services to the Company as our CFO and Treasurer. From July 1999 to June 2002, Ms. Norstrud served as a manager with Pender, Newkirk and Company, CPAs. While at Pender, Ms. Norstrud served a variety of companies from start up enterprises to mid-sized publicly traded companies. Previously, from August 1996 to July 1999, Ms. Norstrud was an Audit Senior with PricewaterhouseCoopers, LLP. Ms. Norstrud graduated from the University of South Florida's College of Business Administration with a Master of Accountancy degree in 2002.

David E. Longacre has been Vice President of Sales and Marketing since January 2010. His background includes over 25 years of experience in the Heating, Ventilation and Air Conditioning (HVAC) industry. His career started with York International as a Sales Engineer, progressing to a Zone Manager over 17 years. He worked as an independent manufactures representative for two years before joining Trane, where he was a Strategic Account Manager and Team Leader for five years. He then worked with Siemens Building Technologies as their Service Sales Manager for a district from 2005 through 2007, then became Branch Manager for Johnson Controls handling the profit and loss for both sales and operations during 2007 through 2009. Mr. Longacre received his BS in Commerce and Engineering from Drexel University in 1980. He is also a LEED AP.

Raymond Kazyaka, Sr. was appointed to our board of directors in 1995. He is the President of RJK Tech Ltd. since 2005. Mr. Kazyaka is the former President (1976-2004) and a co-founder of Wright Malta Corporation, which was founded in 1972 after a buy-out of a GE business. Wright Malta, liquidated in 2005, owned and operated the Malta Test Station, which had performed military product development for various governmental and commercial organizations including Lockheed Martin and Northrup. Mr. Kazyaka has also served as a consultant to the Canadian National Defense on facility noise abatement. Prior to founding Wright Malta, Mr. Kazyaka worked for General Electric as a rocket engine design engineer and a manager. Mr. Kazyaka holds 19 patents on rocket engine components and noise abatement systems, and is a senior member of the American Institute of Aeronautics and Astronautics. Mr. Kazyaka graduated from Union College with a degree in Mechanical Engineering in 1953. Mr. Kazyaka's experience in strategic planning and business acumen provides us with assistance in our overall goals and initiatives.

Robert W. Schwartz was appointed to our board of directors in 2001. Mr. Schwartz founded the Schwartz-Heslin Group ("SHG") in 1985 and serves as one of its Managing Directors. Mr. Schwartz specializes in corporate planning, finance and development. Prior to starting SHG, he was a founder, President and Chief Executive Officer of a venture-funded high tech telecommunications company (Windsource, Inc.). In addition, he was the President and Chief Operating Officer of an AMEX listed company (Coradian Corporation). He was also the Chief Financial Officer of a major manufacturer of outdoor power equipment (Troy Built Products, Troy, NY). His earlier experience was with KPMG as a management consultant and with IBM. Mr. Schwartz received a Bachelor of Science from Cornell University in 1967 and attended graduate courses at the University of New York Albany. He currently serves on the boards of five corporations, including ours. Mr. Schwartz's experience in financial planning and reporting provides assistance to us in these areas and he is considered to be a financial expert to the company.

The Board members serve for the latter of a period of one year or until the next annual meeting of shareholders. Our executive officers are

appointed by our board of directors and hold office until removed by the Board.

#### **Director Candidates**

The following three director nominees have agreed to serve as members of our Board of Directors, effective as of, and subject to, the closing of this offering:

Lon Bell, Ph.D, age 70, has recently agreed to join our Board. Dr. Bell founded Amerigon Inc. in 1991 and has been a Consultant to Amerigon since December 2010. Dr. Bell has served many roles in Amerigon, Inc., including Chief Technology Officer until December 31, 2010; Director of Technology until 2000; Chairman and Chief Executive Officer until 1999; President until 1997. Dr. Bell served as the Chief Executive Officer and President of BSST LLC, a subsidiary of Amerigon from September 2000 to December 31, 2010. Previously, Dr. Bell co-founded Technar Incorporated, which developed and manufactured automotive components and served as Technar's Chairman and President until selling majority ownership to TRW Inc. in 1986. Dr. Bell continued managing Technar, then known as TRW Technar, as its President until 1991. He co-founded Mahindra REVA Electric Vehicle Co Ltd. in 1994 and serves as its Vice Chairman. He served as Vice Chairman of Amerigon in 1994. He has been Director of Amerigon since February 16, 2007. He served as a Director of Amerigon since 1991. He has been a Member of Scientific Advisory Board of Nextreme Thermal Solutions, Inc. since June 22, 2006. Dr. Bell is a leading expert in the mass production of thermoelectric products. He has authored more than 20 publications in the areas of thermodynamics of thermoelectric systems, automotive crash sensors, and other electronic and electromechanical devices. Five of his inventions have gone into mass production, and dominated their target markets. Dr. Bell received a BSc in Mathematics in 1962, a Master's degree in Rocket Propulsion in 1963, and a Ph.D. in Mechanical Engineering in 1968 from the California Institute of Technology.

Richard Rutkowski, age 55, has recently agreed to join our Board. Mr. Rutkowski has served as Chief Executive Officer of ClearSign Combustion Corporation since 2008 and Principal at Ormont since 2006. Previous roles include Founder and Director at Lumera Corporation from 2000 to 2006; Founder and CEO of Microvision Inc. from 1994 to 2006; and Executive Vice President at Medialink Technologies from 1992 to 1994. Mr. Rutkowski attended the University of Chicago. Mr. Rutkowski specializes in business development and product planning strategy, corporate finance and capital raising, marketing and strategic communications, and building and leading high quality teams with a proven track record of success.

Peter Termyn, age 51, has recently agreed to join our Board. Mr. Termyn has been the President and CEO at Parkinson Technologies since January 2007. Parkinson Technologies Inc. is a world-wide industry leader in the development, design and manufacturing of web processing machinery for the plastics, nonwovens, paper and specialty materials for use in key markets including healthcare, flexible/ridge packaging, automotive, and construction. Parkinson's customers base includes a broad range of companies, from venture-backed startups to Fortune 50 enterprises located world-wide, all of whom demand innovative solutions to their web processing challenges.

Staying highly focused on its core objectives, making world-class personnel additions, and leading investments that improved his company's operations and abilities to serve its diverse customer base Termyn created solid, sustainable growth in its existing business areas and newer areas such as the extrusion of newer materials using polylactic acid films, and specialty films like separator films for rechargeable batteries.

He previously directed the company's commercial organization and led efforts to unlock its growth potential in emerging clean-tech and bio-based material processing applications.

Prior to Parkinson, Mr. Termyn held multiple technical, commercial and business management roles in the semiconductor, fluid transfer, and chemical, automotive and engineered products industries with Helix Technology, Tyco International, BOC Group, ITT Corporation, and Dresser Industries.

Mr. Termyn holds dual engineering degrees in Chemical Engineering and Materials/Metallurgical Engineering from the University of Michigan, in addition to a Masters of Business Administration from the University of Michigan.

#### Director Independence

The OTC Bulletin Board does not have rules regarding director independence. We have applied for listing of our common stock on AMEX, which listing we expect to occur on or immediately prior to the date of this prospectus. Therefore, our determination of the independence of directors is made using the definition of "independent" contained in the listing standards of AMEX. On the basis of information solicited from each director, the board has determined that Raymond Kazyaka, Sr. and Robert W. Schwartz have no material relationship with us and are independent within the meaning of such rules. In making this determination, the board evaluated responses to a questionnaire completed by each director regarding relationships and possible conflicts of interest between each director, the company and management. In its review of director independence, the board considered all commercial, industrial, banking, consulting, legal, accounting, charitable, and familial relationships any director may have with the company or management. At present we do not have audit or compensation committees established. It is our intention on the closing of this offering to add new outside Board members, and establish at a minimum an audit and compensation committee. Involvement in Certain Legal Proceedings

To our knowledge, none of our directors or officers is or was a party to any legal proceeding required to be disclosed pursuant to Item 401(f) of Regulation S-K.

#### DIRECTOR COMPENSATION

Change

#### Director Compensation

The following table sets forth the compensation awarded to, earned by or paid to the nonemployee directors during the fiscal year ended December 31, 2010 and 2009.

|                     |      |            |       |               |      |        |         | Cita      | inge     |             |      |          |  |
|---------------------|------|------------|-------|---------------|------|--------|---------|-----------|----------|-------------|------|----------|--|
|                     |      |            |       |               |      |        | in      |           |          |             |      |          |  |
|                     |      |            |       |               |      |        | Pension |           |          |             |      |          |  |
|                     |      |            |       |               |      |        | Value   |           |          |             |      |          |  |
|                     |      |            |       |               |      |        |         | and       |          |             |      |          |  |
|                     |      |            |       |               |      |        |         | Nor       | n-qualif | ied         |      |          |  |
|                     |      | Fees Earne | ed    |               |      |        | Non-E   | quity Def | •        |             |      |          |  |
|                     |      | or Paid in | Stock |               | Op   | tion   | Incenti | ve Planor | npensat  | iøldl O     | ther |          |  |
|                     |      | Cash       | Award | Awards Awards |      | •      |         |           |          | ompensation |      |          |  |
|                     |      | (\$)       | (\$)  |               | (\$) |        | (\$)    | (\$)      | Ü        | (\$)        |      | tal (\$) |  |
| Name (a)            |      | (b)        | (c)   |               | (d)  |        | (e)     | (f)       |          | (g)         | (h)  | ( )      |  |
| Raymond Kazyaka     |      | ` ′        | , í   |               |      |        | Ì       | Ì         |          | ,           | , í  |          |  |
| Sr., Director(1)    | 2010 |            | _     |               | \$   | 95,869 |         | _         |          |             | — \$ | 95,869   |  |
|                     | 2009 |            | _     | _             |      | 31,165 |         |           | _        |             | _    | 31,165   |  |
| Robert W. Schwartz, |      |            |       |               |      | ·      |         |           |          |             |      | ·        |  |
| Director(2)         | 2010 |            | _     |               | \$   | 95,869 |         |           |          |             | — \$ | 95,869   |  |
| . ,                 | 2009 |            | _     |               |      | 31,165 |         | _         |          |             |      | 31,165   |  |
|                     |      |            |       |               |      |        |         |           |          |             |      |          |  |

<sup>(1)</sup> At December 31, 2010, Mr. Kazyaka had options to purchase 904,600 shares (90,460 upon effecting proposed 10-for-1 reverse stock split) and no stock awards outstanding.

We do not have a plan pursuant to which our directors are compensated and directors currently do not receive cash compensation for their services on the Board of Directors although they do receive stock options as determined by the full board of directors with each director abstaining from any such vote involving himself or a member of his immediate family. Timothy N. Tangredi, Raymond Kazyaka Sr. and Robert W. Schwartz were each granted an option on June 25, 2010 to purchase 400,000 shares of common stock at an exercise price of \$0.30 per share, (an option to purchase 40,000 shares of common stock at an exercise price of \$3.00 upon reflecting proposed 10-for-1 reverse stock split) vesting immediately upon issuance and exercisable for a period of ten years. This option grant to Mr. Tangredi as a director is contained in the table summarizing grants made to our officers.

Our non-employee directors are currently compensated with the issuance of stock options, which generally become exercisable upon the date of grant, and which generally expire on the earlier of ten years from the date of grant or up to three years after the date that the optionee ceases to serve as a director. Non-employee directors are also reimbursed for out-of-pocket expenses associated with attending to our business.

<sup>(2)</sup> At December 31, 2010, Mr. Schwartz had options to purchase 874,600 shares (87,460 upon reflecting proposed 10-for-1 reverse stock split) and no stock awards outstanding.

#### **EXECUTIVE COMPENSATION**

The table below summarizes the total compensation paid to or earned by our principal executive officer, our principal financial officer and each of our two other executive officers other than our principal executive officer and principal financial officer in the last two fiscal years. The amounts represented in the "Option Awards" column reflect the stock compensation expense recorded by the Company under GAAP and does not necessarily equate to the income that will ultimately be realized by the named executive officers for such awards.

**Summary Compensation Table** 

|   |              |          |                    |    |        |                |          |                     |                      | Non-qualified Deferred      | All                |                      |
|---|--------------|----------|--------------------|----|--------|----------------|----------|---------------------|----------------------|-----------------------------|--------------------|----------------------|
|   |              |          | Salary             |    | Bonus  | Stock          |          | Option<br>Awards    | Non-Equity Incentive | Compensation<br>Earningscon | other<br>pensation | Total                |
| Name and principal position   | Year         |          | (\$)               |    | (\$)   | Awards (\$)(2) |          | (\$)(2)             | Plan                 | (\$)                        | (\$)               | (\$)                 |
| (a)   | (b)          |          | (c)                |    | (d)    | (e)            |          | (f)                 | (g)                  | (h)                         | (i)                | (j)                  |
| Timothy N. Tangredi<br>Chief Executive Officer,<br>President, and Chairman<br>of the Board of<br>Directors(1) | 2010<br>2009 | \$<br>\$ | 170,000<br>170,000 |    | _      | _              | \$<br>\$ | 95,869<br>1,134,425 | =                    | _                           | -\$<br>-\$         | 265,869<br>1,304,425 |
| Robert W. Brown<br>Vice President of<br>Marketing (3)   | 2009         | \$       | 57,187             |    | _      | _              |          | _                   | _                    | _                           | —\$                | 57,187               |
| David E. Longacre<br>Vice President of Sales<br>and Marketing   | 2010         | \$       | 125,000            | \$ | 10,000 | _              | \$       | 73,386              | _                    | _                           | -\$                | 208,386              |
|   |              |          |                    |    |        |                |          |                     |                      |                             |                    |                      |
| Scott G. Ehrenberg<br>Chief Technology<br>Officer and Secretary   | 2010<br>2009 | \$<br>\$ | 74,808<br>67,100   |    |        | _              | \$       | 89,877<br>—         | _<br>_               | _                           | — \$<br>— \$       | 164,685<br>67,100    |
| Judith C. Norstrud<br>Chief Financial Officer<br>and Treasurer  | 2010<br>2009 | \$<br>\$ | 50,000<br>13,447   |    | _<br>_ | _<br>_         | \$<br>\$ | 35,951<br>82,930    | _<br>_               | _<br>_                      | — \$<br>— \$       | 85,951<br>96,377     |

<sup>(1)</sup> Mr. Tangredi receives a salary of \$170,000 per year, and may receive a bonus in an amount not to exceed 100% of his salary, which bonus shall be measured by meeting certain performance goals as determined in the sole discretion of our board of directors. In 2010 and 2009, Mr. Tangredi was paid \$110,833 and \$55,350, respectively and has accrued unpaid salary of \$59,167 for 2010 and \$114,650 for 2009. Additional accruals have been made for the years prior to 2009. As of October 10, 2011, we owed Mr. Tangredi accrued compensation in the aggregate amount of \$1,047,884.

(3) Mr. Brown's employment with us terminated on July 6, 2010.

<sup>(2)</sup> The amounts included in these columns are the aggregate dollar amounts of compensation expense recognized by us for financial statement reporting purposes in accordance with Accounting Standards Codification 718, Compensation-Stock Compensation, for the fiscal years ended December 31, 2010 and December 31, 2009, and thus include amounts from option awards granted in and prior to the indicated year. For information on the valuation assumptions used in calculating these dollar amounts, see Note 1 to our audited financial statements included in this Registration Statement for the fiscal years ended December 31, 2010 and December 31, 2009, each as filed with the SEC. These amounts reflect our accounting expense for these awards and do not correspond to the actual value that may be recognized by the individuals upon option exercise. During the fiscal year ended December 31, 2010, there were forfeitures of options for the purchase of up to 371,125 shares related to service-based vesting conditions.

Narrative Disclosure to Summary Compensation Table

**Employment Agreements** 

Timothy N. Tangredi. We are party to an employment agreement with Mr. Tangredi, our President, Chief Executive Officer, and director, which was amended and restated on September 14, 2011. Mr. Tangredi's employment agreement provides for an initial term of three years commencing on September 14, 2011 with the term extending on the second anniversary thereof for an additional two-year period and on each subsequent anniversary of the commencement date for an additional year period. Mr. Tangredi's initial base salary is \$200,000. Mr. Tangredi's base salary shall be increased annually, if applicable, by a sum equal to his current base salary multiplied by one third of the percentage increase in our yearly revenue compared to our prior fiscal year revenue; provided however any annual increase in Mr. Tangredi's base salary shall not exceed a maximum of 50% for any given year. Any further increase in Mr. Tangredi's base salary shall be at the sole discretion of our board of directors or compensation committee (if applicable). In addition, Mr. Tangredi will be eligible for bonus compensation at the discretion of board of directors, as well as option-based compensation under our 2009 Plan. Among the option grants Mr. Tangredi is eligible to receive under this agreement is a grant to purchase up to 520,000 shares of common stock (52,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) upon the successful completion of this offering. For a full description of the terms of our agreement with Mr. Tangredi, please refer to the section below entitled "Certain Relationships and Related Party Transactions —Employment Agreements."

Scott G. Ehrenberg. We are party to an employment agreement dated May 24, 2011 with Mr. Ehrenberg, our Chief Technology Officer and Secretary. Mr. Ehrenberg's employment agreement provides for an initial term of two years with the term extending on the second anniversary thereof for an additional one year period and on each subsequent anniversary of the agreement for an additional year period. Mr. Ehrenberg's initial base salary is \$110,000, with an increase to \$165,000 per annum. Additionally, at the discretion of our board of directors and its compensation committee, Mr. Ehrenberg may be eligible for an annual bonus which amount, if any, will not be below 50% of his effective base salary and not exceeding 100% of his then effective base salary; provided that, under certain extraordinary circumstances, Mr. Ehrenberg may be eligible for an annual bonus greater than 150% of his then effective base salary. After the completion of this offering, Mr. Ehrenberg is eligible to receive a one-time payment of \$20,000 for each U.S. patent of which he is the originator and the first name listed on the patent as inventor of the intellectual property described in such patent. In addition to any other compensation which Mr. Ehrenberg may receive under the agreement, he will be granted a stock option to purchase 40,000 shares of common stock (4,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) at the end of each year or on the annual anniversary of the agreement, whichever is mutually acceptable to the Company and Mr. Ehrenberg. For a full description of the terms of our agreement with Mr. Ehrenberg, please refer to the section below entitled "Certain Relationships and Related Party Transactions — Employment Agreements."

Patricia K. Tangredi. We are a party to an employment agreement with Patricia Tangredi, our general counsel and wife of Timothy Tangredi, our Chief Executive Officer, which agreement was amended and restated on April 8, 2011. Ms. Tangredi's employment agreement provides for an initial term of four years with the term extending on the fourth anniversary thereof for an additional one year period and on each subsequent anniversary of the agreement for an additional year period. Ms. Tangredi's initial base salary is \$120,000, with an increase to \$150,000 per annum or such higher sum as our board of directors may set after the date on which we obtain \$10 million or more in equity or debt financing. In addition to any other compensation which she may receive under the agreement, Ms. Tangredi shall be granted options to purchase a minimum of 50,000 shares of our common stock (5,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) which shall be issued at year end or upon the anniversary of this agreement, as the parties shall agree. For a full description of the terms of our agreement with Ms. Tangredi, please refer to the section below entitled "Certain Relationships and Related Party Transactions — Employment Agreements."

#### Outstanding Equity Awards

#### Outstanding Equity Awards at Fiscal Year-End

The following table summarizes the outstanding equity awards for the year ended December 31, 2010 prior to the effect of the anticipated 10-for-1 reverse stock split:

| 10-for-1 revers | se stock split:            |                              |                          |          |          |                       |                           |                |                        |             |
|-----------------|----------------------------|------------------------------|--------------------------|----------|----------|-----------------------|---------------------------|----------------|------------------------|-------------|
| OPTION AWAI     | RDS                        |                              |                          |          |          |                       | STOCK AWA                 | ARDS           |                        |             |
| OI HON AWA      | KD3                        |                              |                          |          |          |                       | 510CK AWA                 | AKDS           |                        | Equity      |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | incentive   |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | plan        |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | awards:     |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | Market      |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | or          |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | payout      |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | value of    |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | unearned    |
|                 |                            |                              |                          |          |          |                       |                           |                |                        | shares,     |
|                 |                            |                              | Equity                   |          |          |                       |                           |                | Equity                 | units or    |
|                 |                            |                              | Incentive Plan           |          |          |                       |                           |                | incentive plan         |             |
|                 |                            |                              | Awards:                  |          |          |                       |                           | Market value   | awards:                | other       |
|                 | Number of                  | Number of                    | Number of                |          |          |                       | <b>N</b> 1 C              | of shares or   | number of              | rights that |
|                 | securities                 | securities                   | Securities<br>underlying |          | Option   |                       | Number of shares or units | units of stock | unearned shares, units | have        |
|                 | underlying                 | underlying                   | unexercised              |          | exercise | Option                | of stock that             | that have      | or other rights        | not         |
|                 | unexercised                | unexercised                  | unearned                 |          | price    | expiration            | have not                  | not            | that have not          | vested      |
| Name            | options (#)<br>Exercisable | options (#)<br>Unexercisable | options (#)              |          | (\$)     | date                  | vested (#)                | vested (\$)    | vested (#)             | (\$)        |
| (a)             | (b)                        | (c)                          | (d)                      |          | (e)      | (f)                   | (g)                       | (h)            | (i)                    | (j)         |
| Timothy N.      |                            |                              |                          |          |          |                       |                           |                |                        |             |
| Tangredi (1)    | 825,000                    | _                            | _                        |          |          | 9/23/2014             | _                         | _              | _                      | _           |
|                 | 150,000                    | _                            |                          |          |          | 5/10/2015             | <del>-</del>              |                | _                      |             |
|                 | 120,000<br>40,000          | <del>_</del>                 |                          |          |          | 10/1/2015<br>5/2/2016 | <del>-</del>              |                | _                      | _           |
|                 | 110,000                    |                              |                          |          |          | 11/1/2016             |                           | _              |                        |             |
|                 | 140,000                    | _                            | _                        |          |          | 2/20/2017             | _                         | _              | _                      | <u> </u>    |
|                 | 300,000                    | _                            | _                        |          |          | 8/18/2017             | _                         | _              | _                      | _           |
|                 | 350,000                    | _                            | _                        | \$       | 0.21     | 1/30/2018             | _                         | _              | _                      | _           |
|                 | 3,000,000*                 | _                            | _                        |          |          | 8/4/2013              | _                         | _              | _                      | _           |
|                 | 75,000                     |                              | _                        |          |          | 8/4/2018              |                           | _              |                        |             |
|                 | 100,000                    | _                            | _                        |          |          | 11/12/2019            | _                         | _              | _                      | _           |
|                 | 3,540,058                  | _                            | _                        |          |          | 11/12/2019            | _                         | <u> </u>       | _                      | <u> </u>    |
|                 | 400,000                    | _                            | _                        | <b>3</b> | 0.30     | 6/25/2020             | _                         | <del>-</del>   | <u> </u>               | <u> </u>    |
| * Warrant       |                            |                              |                          |          |          |                       |                           |                |                        |             |
| wairant         |                            |                              |                          |          |          |                       |                           |                |                        |             |
| Scott G.        |                            |                              |                          |          |          |                       |                           |                |                        |             |
| Ehrenberg (2)   | 140,000                    | _                            | _                        | \$       | 0.26     | 9/23/2014             | _                         | _              | _                      | _           |
| 8()             | 110,000                    | _                            | _                        |          |          | 5/10/2015             |                           |                | _                      | _           |
|                 | 80,000                     | _                            | _                        | \$       |          | 10/1/2015             | _                         | _              | _                      | _           |
|                 | 40,000                     | _                            | _                        |          |          | 11/1/2016             | _                         | _              | _                      | _           |
|                 | 120,000                    | <u> </u>                     | _                        |          |          | 2/20/2017             | _                         | _              | _                      | _           |
|                 | 50,000                     | _                            |                          |          |          | 8/18/2017             | _                         | _              |                        | _           |
|                 | 250,000                    | _                            | _                        |          |          | 8/4/2018              | _                         | <del></del>    |                        | _           |
|                 | *250,000<br>125,000        | 250,000                      | 250,000                  | \$       |          | 8/4/2013<br>6/25/2020 |                           | _              |                        |             |
|                 | 125,000                    | 250,000                      | 230,000                  | ф        | 0.30     | 6/25/2020             | <u> </u>                  | _              | _                      | _           |
| * Warrant       |                            |                              |                          |          |          |                       |                           |                |                        |             |
| · vv arrant     |                            |                              |                          |          |          |                       |                           |                |                        |             |
| Judith C.       |                            |                              |                          |          |          |                       |                           |                |                        |             |
| Norstrud (3)    | 200,000                    |                              | _                        | \$       | 0.45     | 10/15/2019            |                           | _              | _                      | _           |
| 110151144 (3)   | 200,000                    | <del>-</del>                 |                          | Ψ        | 0.73     | 10/13/2017            |                           |                |                        |             |

|              | 50,000 | 100,000 | 100,000 \$ | 0.30 | 6/25/2020 | _ | _ | _ |   |
|--------------|--------|---------|------------|------|-----------|---|---|---|---|
| David E.     |        |         |            |      |           |   |   |   |   |
| Longacre (4) | _      | 200,000 | — \$       | 0.28 | 1/20/2020 | _ |   | _ |   |
|              |        | 100,000 | — \$       | 0.30 | 7/6/2020  |   | _ | _ | _ |
|              |        |         |            |      |           |   |   |   |   |
|              |        |         |            |      |           |   |   |   |   |
| 48           |        |         |            |      |           |   |   |   |   |

The following table summarizes the outstanding equity awards for the year ended December 31, 2010 upon giving effect to the anticipated 10-for-1 reverse stock split:

|                            |                          | OPTION A                 | WARDS                    |          |              |                          |                           | STOCK            | AWARDS                        |  |
|----------------------------|--------------------------|--------------------------|--------------------------|----------|--------------|--------------------------|---------------------------|------------------|-------------------------------|--|
|                            |                          | 011101111                | Willes                   |          |              |                          |                           | brock            | TWINEDS                       | Equity                                 |
|                            |                          |                          |                          |          |              |                          |                           |                  |                               | incentive<br>plan<br>awards:<br>Market |
|                            |                          |                          |                          |          |              |                          |                           |                  |                               | or                                     |
|                            |                          |                          |                          |          |              |                          |                           |                  |                               | payout                                 |
|                            |                          |                          |                          |          |              |                          |                           |                  |                               | value of                               |
|                            |                          |                          |                          |          |              |                          |                           |                  |                               | unearned                               |
|                            |                          |                          |                          |          |              |                          |                           |                  |                               | shares,                                |
|                            |                          |                          | Equity<br>Incentive Plan |          |              |                          |                           |                  | Equity                        | units or                               |
|                            |                          |                          | Awards:                  |          |              |                          |                           | Market value     | incentive plan awards:        | other                                  |
|                            |                          |                          | Number of                |          |              |                          |                           | of shares or     | number of                     | rights                                 |
|                            | Number of                | Number of                | Securities               |          | Option       |                          | Number of                 | units of         | unearned                      | that have                              |
|                            | securities<br>underlying | securities<br>underlying | underlying               |          | exercise     | 0 4                      | shares or units           | stock            | shares, units                 | not                                    |
|                            | unexercised              | unexercised              | unexercised<br>unearned  |          | price        | Option expiration        | of stock that<br>have not | that have<br>not | or other rights that have not | vested                                 |
|                            | options (#)              | options (#)              |                          |          | •            | date                     |                           | vested (\$)      | vested (#)                    |  |
| Name                       | Exercisable              | Unexercisable            | options (#)              |          | (\$)         |                          | vested (#)                |                  |                               | (\$)                                   |
| (a)                        | (b)                      | (c)                      | (d)                      |          | (e)          | (f)                      | (g)                       | (h)              | (i)                           | (j)                                    |
| Timothy N.<br>Tangredi (1) | 82,500                   |                          | _                        | \$       | 2.60         | 9/23/2014                | <u></u>                   | <u></u>          |                               |  |
| Tangreat (1)               | 15,000                   | _                        | _                        | \$       | 1.00         | 5/10/2015                | _                         | _                | _                             | _                                      |
|                            | 12,000                   | _                        | _                        |          | 1.00         | 10/1/2015                | _                         | _                | _                             | _                                      |
|                            | 4,000                    | _                        | _                        | \$       | 3.00         | 5/2/2016                 |                           |                  |                               | _                                      |
|                            | 11,000                   | _                        | _                        | \$       | 5.50         | 11/1/2016                | _                         | _                | _                             | _                                      |
|                            | 14,000                   | _                        | _                        |          | 5.50         | 2/20/2017                |                           |                  | _                             |  |
|                            | 30,000                   | _                        | _                        |          | 2.10         | 8/18/2017                | _                         | _                | _                             | _                                      |
|                            | 35,000                   | _                        |                          | \$       | 2.10         | 1/30/2018                |                           |                  |                               | _                                      |
|                            | 300,000*                 | _                        | _                        |          | 3.60         | 8/4/2013                 | _                         | <del>-</del>     | _                             | _                                      |
|                            | 7,500<br>10,000          | <del>-</del>             |                          | \$       | 3.00<br>4.20 | 8/4/2018                 | _                         |                  | <del>_</del>                  | _                                      |
|                            | 354,006                  | _                        | _                        | -        | 4.20         | 11/12/2019<br>11/12/2019 | _                         | _                | _                             | _                                      |
|                            | 40,000                   |                          |                          |          | 3.00         | 6/25/2020                |                           | _                |                               | _                                      |
|                            | .0,000                   |                          |                          | Ψ        | 2.00         | 0/20/2020                |                           |                  |                               |  |
| * Warrant                  |                          |                          |                          |          |              |                          |                           |                  |                               |  |
| Scott G.                   |                          |                          |                          |          |              |                          |                           |                  |                               |  |
| Ehrenberg (2)              | 14,000                   | _                        | _                        | \$       | 2.60         | 9/23/2014                | _                         | _                | _                             | _                                      |
| _                          | 11,000                   | _                        | _                        | \$       | 1.00         | 5/10/2015                | _                         | _                | _                             | _                                      |
|                            | 8,000                    | _                        | _                        |          | 1.00         | 10/1/2015                | _                         | _                | _                             | _                                      |
|                            | 4,000                    |                          |                          | \$       | 5.50         | 11/1/2016                |                           |                  |                               | _                                      |
|                            | 12,000                   | _                        | <u> </u>                 |          | 5.50         | 2/20/2017                | _                         | _                | _                             | _                                      |
|                            | 5,000                    | <u> </u>                 | _                        |          | 2.10         | 8/18/2017                |                           |                  | _                             | _                                      |
|                            | 25,000                   | _                        | _                        |          | 3.00         | 8/4/2018                 | <del>-</del>              | _                | _                             | _                                      |
|                            | *25,000<br>12,500        | 25,000                   | 25,000                   | \$<br>\$ | 3.00<br>3.00 | 8/4/2013<br>6/25/2020    | _                         | _<br>            | _                             | _                                      |
|                            | 12,300                   | 23,000                   | 23,000                   | φ        | 3.00         | 0/23/2020                | <u>—</u>                  | <u> </u>         | <u>—</u>                      | _                                      |
| * Warrant                  |                          |                          |                          |          |              |                          |                           |                  |                               |  |
| Judith C.                  |                          |                          |                          |          |              |                          |                           |                  |                               |  |
| Norstrud (3)               | 20,000                   | _                        |                          | \$       | 4.50         | 10/15/2019               | _                         | _                | _                             | _                                      |
|                            | 5,000                    | 10,000                   | 10,000                   | \$       | 3.00         | 6/25/2020                | _                         | _                | _                             | _                                      |

| David E.     |   |        |      |      |           |   |   |   |   |
|--------------|---|--------|------|------|-----------|---|---|---|---|
| Longacre (4) | _ | 20,000 | — \$ | 2.80 | 1/20/2020 | _ | _ | _ | _ |
|              |   | 10,000 | — \$ | 3.00 | 7/6/2020  |   |   |   | _ |

- (1) The April 2008 warrant grant to Mr. Tangredi for 3,000,000 shares (300,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) was made by the Board of Directors in recognition for Mr. Tangredi's achievement of the following goals: negotiating conversion of the convertible notes issued in the Additional Financing, securing a release with respect to the consulting agreement with Gray Capital Partners, Inc., securing and closing upon the Financing. All stock options issued to Mr. Tangredi prior to December 31, 2009 were issued under the 2000 Plan. The remaining options were issued under the 2009 Plan.
- (2) All stock options issued to Mr. Ehrenberg prior to December 31, 2009 were issued under the 2000 Plan. The remaining options issued under the 2009 Plan.
- (3) All stock options issued to Ms. Norstrud prior to December 31, 2009 were issued under the 2000 Plan. The remaining options were issued under the 2009 Plan.
- (4) All stock options issued to Mr. Longacre were issued under the 2009 Plan.

#### SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information as of the date of this prospectus as to each person or group who is known to us to be the beneficial owner of more than 5% of our outstanding voting securities and as to the security and percentage ownership of each of our executive officers, directors and nominees and of all of our officers, directors and nominees as a group.

Beneficial ownership is determined under the rules of the SEC and generally includes voting or investment power over securities. The number of shares shown as beneficially owned in the tables below are calculated pursuant to Rule 13d-3(d)(1) of the Exchange Act. Under Rule 13d-3(d)(1), shares not outstanding that are subject to options, warrants, rights or conversion privileges exercisable within 60 days are deemed outstanding for the purpose of calculating the number and percentage owned by such person, but not deemed outstanding for the purpose of calculating the percentage owned by each other person listed. Except in cases where community property laws apply or as indicated in the footnotes to this table, we believe that each shareholder identified in the table possesses sole voting and investment power over all of the shares of common stock shown as beneficially owned by the shareholder.

The address for each of the persons named below is 11552 Prosperous Drive, Odessa, FL 33556, unless otherwise indicated.

Applicable percentage ownership in the following table is based on approximately 37,517,604 shares of common stock outstanding as of October 10, 2011 (3,751,760 shares of common stock upon giving effect to the anticipated 10-for-1 reverse stock split) plus, for each individual, any securities that individual has the right to acquire within 60 days of October 10, 2011. The following table does not reflect any conversion of notes or accrued compensation which may occur within the above-mentioned 60 day period.

|  |                    |                | Common           |
|--|--------------------|----------------|------------------|
|  |                    | Sto            | ck Beneficially  |
|  |                    |                | wned Number      |
|  |                    |                | of Shares of     |
|  | Common             | C              | ommon Stock      |
|  | Stock Beneficially |                | after giving     |
|  | Owned Number       |                | effect to the    |
|  | of Shares of       | Percentage ant | icipated reverse |
| Name of Beneficial Owner   | Common Stock       | of Class       | stock            |
| Timothy N. Tangredi  |                    |                |                  |
| (Officer and Chairman) (1)   | 12,310,477         | 25.0%          | 1,231,048        |
| David Longacre (Officer) (2)                                       | 100,001            | .3%            | 10,000           |
| Scott G. Ehrenberg (3) (Officer)                                   | 2,077,800          | 5.3%           | 207,780          |
| Judith Norstrud (Officer) (4)                                      | 572,500            | 1.5%           | 57,250           |
| Raymond Kazyaka Sr. (Director) (5)                                 | 1,174,600          | 3.0%           | 117,460          |
| Robert W. Schwartz (Director) (6)                                  | 1,144,6 00         | 3.0%           | 114,460          |
| Richard Rutkowski (Director Nominee)                               | 0                  | 0.0%           | 0                |
| Lon Bell (Director Nominee)  | 0                  | 0.0%           | 0                |
| Peter Termyn (Director Nominee)                                    | 0                  | 0.0%           | 0                |
| Executive officers, directors and nominees, as a group (9 persons) | 17,379,978         | 31.8%          | 1,737,998        |
| Brian A. Kelly   |                    |                |                  |
| 181C Hague Blvd. Glenmont, N.Y. 12077                              | 2,254,085          | 6.0%           | 225,409          |
| Michael Gostomski (7)  |                    |                |                  |
| 1666 Valley View Dr. Winnona, MN 55987                             | 3,355,535          | 8.8%           | 335,554          |
| Louis M. Jaffe (8)   |                    |                |                  |
| 1500 S. Ocean Blvd #5201 Boca Raton, FL 33432                      | 3,684,300          | 9.5%           | 368,430          |
| Mark Nordlich (9)  |                    |                |                  |
| 152 West 575th St. 4th Floor New York, NY 10019                    | 3,793,240          | 9.99%          | 379,324          |
| Leonard Samuels (10)   |                    |                |                  |
| 1011 Centennial Road Penn Valley, PA 19072                         | 13,478,165         | 31.8%          | 1,347,817        |
|  |                    |                |                  |

| Leah Kaplan Samuels (11)                   |           |      |         |
|--|-----------|------|---------|
| 1011 Centennial Road Penn Valley, PA 19072 | 3,629,696 | 9.4% | 362,970 |
|  |           |      |         |
|  |           |      |         |
| 50   |           |      |         |

- (1)Includes 9,420,058 shares (942,006 shares upon giving effect to the anticipated 10-for-1 reverse stock split) of common stock issuable upon exercise of stock options and warrants and 2,863,358 shares (286,336 shares upon giving effect to the anticipated 10-for-1 reverse stock split) beneficially owned by Mr. Tangredi's wife, Patricia Tangredi. 2,735,558 of Ms. Tangredi's shares (273,556 shares upon giving effect to the anticipated 10-for-1 reverse stock split) are issuable upon the exercise of stock options. Excludes an estimated 166,971 shares of common stock that would be issued in partial payment of Mr. Tangredi's accrued unpaid compensation (assuming completion of the offering at a public offering price of \$4.00 per share after taking into account the anticipated 10-for-1 reverse stock split and cash payment of approximately \$380,000).
- (2)Includes 100,001 shares of common stock (10,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of stock options.
- (3) Includes 1,990,000 shares of common stock (199,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon the exercise of stock options and warrants and 41,400 shares (4,140 shares upon giving effect to the anticipated 10-for-1 reverse stock split) beneficially owned by Mr. Ehrenberg's wife, Linda Ehrenberg.
- (4) Includes 572,500 shares of common stock (57,250 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of stock options.
- (5) Includes 1,174,600 shares of common stock (117,460 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of stock options.
- (6)Includes 1,144,600 shares of common stock (114,460 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of stock options.
- (7) Includes 807,087 common shares issuable (80,709 shares upon giving effect to the anticipated 10-for-1 reverse stock split upon exercise of certain warrants.
- (8) Includes 666,500 shares of common stock (66,650 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of certain outstanding warrants issued in connection with the Financing to Louis M. Jaffe 2004 Intangible Asset Mgmt. TR U/A DTD 5/24/04 and 298,077 shares of common stock (29,808 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of certain outstanding warrants issued in connection with a purchase of Company's common stock in 2009. Also includes 1,819,715 shares (181,972 shares upon giving effect to the anticipated 10-for-1 reverse stock split) held by the aforementioned trust, 250,004 shares (25,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) held by the Louis Jaffe TTEE Irrevocable Trust – Jennifer Jaffe and 250,004 shares (25,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) held by the Louis Jaffe TTEE Irrevocable Trust – Lara Jaffe Taylor. The natural person with voting power and investment power on behalf each of the aforementioned trusts is Louis M. Jaffe. Also includes 100,000 shares (10,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) held by the Diana G. Jaffe Revocable Trust Dated 8/4/99 and 50,000 shares (5,000 shares upon giving effect to the anticipated 10-for-1 reverse split) held by Ashlin Trevor Jaffe under the Florida Uniform Gift to Minors Act for which Diana G. Jaffe, Louis M. Jaffe's wife, is the natural person with voting power and investment power on behalf of the trusts and 250,000 shares of common stock (25,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable on exercise of a certain outstanding warrant issued to Louis M. Jaffe pursuant to a consulting agreement.

- (9) Includes 3,324,740 shares of common stock (332,474 shares upon giving effect to the anticipated 10-for-1 reverse stock split), and 468,500 shares (46,850 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon the exercise of certain outstanding warrants. The natural person with voting power and investment power on behalf of Platinum Montaur Life Sciences, LLC is Mark Nordlich. Platinum Montaur Life Sciences, LLC hold warrants for the purchase of up to 7,999,000 shares of common stock (799,990 shares upon giving effect to the anticipated 10-for-1 reverse stock split). Among these warrants, excluded from the above table are 7,530,500 shares of common stock (753,050 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of those warrants, and two convertible notes which would (as of October 10, 2011) result in the issuance of 10,632,244 shares (1,063,224 shares upon giving effect to the anticipated 10-for-1 reverse stock split) if fully converted. The warrants as amended and the convertible notes, have certain limitations on exercise and conversion to the extent the shares resulting from such exercise, when aggregated with its other holdings, would result in Platinum Montaur Life Sciences, LLC holding in excess of 9.99% of all our common stock on a beneficially converted basis. These limitations on exercise of certain warrants and conversion of both notes may be waived by the holder. For purposes of this beneficial ownership table, we have assumed the exercise by Platinum Montaur Life Sciences, LLC of its warrants for the maximum number of shares it may acquire and hold at one time (9.99%), without conversion of the notes. As of October 10, 2011 we estimate that at the closing of the contemplated offering, approximately \$1.51 million of net proceeds from the offering will be used to repay principal and interest under these notes, and that approximately 481,800 shares of common stock will be issued in the conversion of the notes (see sections titled "Use of Proceeds" and "Capitalization" below in this prospectus).
- (10) Includes 905,000 shares of common stock (90,500 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of certain outstanding warrants. All of the foregoing warrants are held in the name of Leah Kaplan-Samuels and Leonard Samuels JTWROS. The natural persons with voting power and investment power on behalf of Leah Kaplan-Samuels and Leonard Samuels JTWROS are Leah Kaplan-Samuels and Leonard Samuels. Also includes 3,193,466 shares of common stock (319,347 shares upon giving effect to the anticipated 10-for-1 reverse stock split) and 3,025,000 shares of common stock (302,500 shares upon giving effect to the anticipated 10-for-1 reverse stock split) issuable upon exercise of certain outstanding warrants issued to shareholder RBC Dain Custodian for Leonard Samuels IRA.
- (11)Includes 905,000 shares of common stock (90,500 shares upon giving effect to the anticipated 10 for 1 reverse stock split) issuable upon exercise of warrants. All of the foregoing warrants are held in the name of Leah Kaplan-Samuels and Leonard Samuels JTWROS. The natural persons with voting power and investment power on behalf of Leah Kaplan-Samuels and Leonard Samuels JTWROS are Leah Kaplan-Samuels and Leonard Samuels.

#### Securities Authorized for Issuance under Equity Compensation Plans

In June 2000 and November 2009, our Board of Directors adopted, and our shareholders approved, the 2000 Incentive Compensation Plan and 2009 Long-Term Incentive Plan, respectively (together the "Plans"). The Plans provide for the granting of options to our qualified employees, independent contractors, consultants, directors and other individuals. The Company's Board of Directors approved and made available 15,000,000 shares of common stock (1,500,000 upon giving effect to the anticipated 10-for-1 reverse stock split) to be issued pursuant to the 2009 Plan. The Plans permit grants of options to purchase common shares authorized and approved by our Board of Directors.

The following summarizes the information relating to outstanding stock options activity with employees during 2011, 2010 and 2009:

|                                  | Common<br>Shares | 1  | Veighted<br>Average<br>Exercise<br>Price | Weighted<br>Average<br>Remaining<br>Contractual<br>Term<br>(in years) |             | aggregate<br>Intrinsic<br>Value |
|----------------------------------|------------------|----|--|---|-------------|---------------------------------|
| Outstanding at December 31, 2008 | 8,606,556        | \$ | 0.26                                     | 7.58  | \$          | 38,294                          |
| Granted                          | 4,240,058        | \$ | 0.21                                     | _   | _           | _                               |
| Exercised                        | (25,000)         | \$ | 0.17                                     | _   | <b>_</b> \$ | 3,250                           |
| Forfeited or expired             | (472,732)        | \$ | 0.58                                     | _   | _           | _                               |
|                                  |                  |    |  |   |             |                                 |
| Outstanding at December 31, 2009 | 12,348,882       | \$ | 0.26                                     | 7.64  | \$          | 1,052,839                       |
| Granted                          | 2,970,000        | \$ | 0.30                                     | _   | _           | _                               |
| Forfeited or expired             | (371,125)        | \$ | 0.32                                     | _   | _           |                                 |
|                                  |                  |    |  |   |             |                                 |
| Outstanding at December 31, 2010 | 14,947,757       | \$ | 0.25                                     | 7.19  | \$          | 946,754                         |
| Granted                          | 2,510,000        | \$ | 0.33                                     | _   | _           | _                               |
| Forfeited or expired             | (136,667)        | \$ | 0.11                                     | _   | _           | _                               |
|                                  |                  |    |  |   |             |                                 |
| Outstanding at June 30, 2011     | 17,321,090       | \$ | 0.32                                     | 7.04  | \$          | 1,406,643                       |
|                                  |                  |    |  |   |             |                                 |
| Exercisable at June 30, 2011     | 16,008,937       | \$ | 0.32                                     | 6.86  | \$          | 1,326,355                       |

The following summarizes the information relating to outstanding stock options activity with employees during 2011, 2010 and 2009 upon giving effect to the anticipated 10-for-1 reverse stock split:

|                                  | Common<br>Shares | Weighted<br>Average<br>Exercise<br>Price | Weighted Average Remaining Contractual Term (in years) | In          | gregate<br>trinsic<br>Value |
|----------------------------------|------------------|--|--|-------------|-----------------------------|
| Outstanding at December 31, 2008 | 860,656          | \$ 2.60                                  | 7.58   | \$          | 38,294                      |
| Granted                          | 424,006          | \$ 2.10                                  | _  | _           | _                           |
| Exercised                        | (2,500)          | \$ 1.70                                  | _  | <b>_</b> \$ | 3,250                       |

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| Forfeited or expired             | (47,273) \$  | 5.80 |                   |
|----------------------------------|--------------|------|-------------------|
|                                  |              |      |                   |
| Outstanding at December 31, 2009 | 1,234,889 \$ | 2.60 | 7.64 \$ 1,052,839 |
| Granted                          | 297,000 \$   | 3.00 |                   |
| Forfeited or expired             | (37,113) \$  | 3.20 |                   |
|                                  |              |      |                   |
| Outstanding at December 31, 2010 | 1,494,776 \$ | 2.50 | 7.19 \$ 946,754   |
| Granted                          | 251,000 \$   | 3.30 |                   |
| Forfeited or expired             | (13,667) \$  | 1.10 |                   |
|                                  |              |      |                   |
| Outstanding at June 30, 2011     | 1,732,109 \$ | 3.20 | 7.04 \$ 1,406,643 |
|                                  |              |      |                   |
| Exercisable at June 30, 2011     | 1,600,894 \$ | 3.20 | 6.86 \$ 1,326,355 |

Stock compensation expense was approximately \$651,000 for the year ended December 31, 2010 and \$1,580,000 for the year ended December 31, 2009, including approximately \$75,000 that was accrued for warrants issued subsequent to year end. The total fair value of shares vested during the years ended December 31, 2010 and 2009 was approximately \$556,000 and \$1,549,000, respectively.

As of December 31, 2010, there was approximately \$222,000 of unrecognized employee stock-based compensation expense related to non-vested stock options, of which \$129,000, \$81,000 and \$12,000 is expected to be recognized for the years ended December 31, 2011, 2012 and 2013, respectively.

#### CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions, or proposed transactions, since January 1, 2008, to which we have been a party in which the amount involved exceeded or will exceed the lesser of \$120,000 or one percent of our total assets at year end for the last two completed fiscal years and in which any of our directors, nominees, executive officers, beneficial holders of more than 5% of our capital stock, or entities affiliated with them, had or will have a direct or indirect material interest.

We rent a building on a month to month basis from a related party which is wholly-owned by two shareholders of the Company, one of which is Timothy N. Tangredi, our Chief Executive Officer. The base monthly rent expense is \$3,800 per month. We also pay the taxes, insurance and most repairs on the building. For the years ended December 31, 2010 and 2009, we recorded \$48,792 and \$49,604, in rent expense to this related party, respectively. The Company recognized rent expense of approximately \$11,400 and \$22,800 for each of the three and six months ended June 30, 2011 and 2010. At June 30, 2011 and December 31, 2010, \$45,779 and \$151,440, respectively, were included in accounts payable for amounts owed to these shareholders for rent.

Timothy N. Tangredi, our Chief Executive Officer and Chairman, is a founder and a member of the board of directors of Aegis BioSciences, LLC ("Aegis"). Mr. Tangredi currently owns 52% of Aegis' outstanding equity and spends approximately one to two days per month on Aegis business for which he is compensated by Aegis. Aegis has two exclusive, world-wide licenses from us under which it has the right to use and sell products containing our polymer technologies in biomedical and health care applications. As a result of a \$150,000 payment made by Aegis, the first license is considered fully paid and as such no additional license revenue will be forthcoming. Pursuant to the second license Aegis made an initial one-time payment of \$50,000 and is to make royalty payments of 1.5% of the net sales price it receives with respect to any personal hygiene product, surgical drape or clothing products (the latter when employed in medical and animal related fields) and license revenue it receives should Aegis grant a sublicense to a third party. To date Aegis has sold no such products nor has it received any licensing fees requiring a royalty payment be made to us. We are currently negotiating to purchase all rights Aegis has in its patent applications, including without limitation, any rights it possesses to patent applications it co-owns with us, and potentially terminate the two licenses from us, subject to irrevocable sub-licenses, if any, for a one-time payment of \$200,000 in cash and \$100,000 in shares of our common stock at the same price per share as the price offered to the public in this offering. As a member of Aegis, Mr. Tangredi will receive approximately \$104,000 in cash and \$52,000 in shares of our common stock pursuant to the proposed transaction, which we anticipate will be structured as an asset sale and expect will be contemporaneously consummated with the closing of this offering. We anticipate securing most, if not all, of the funds for this proposed purchase from our cash on hand prior to the closing of the offering.

E. Todd Tracy and Michael Stone, two individuals holding warrants as a result of the Financing exercised and tendered their warrants on September 13, 2011 and received 537,037 and 145,832 shares of the Company's common stock (53,704 and 14,583 shares, respectively, upon giving effect to the anticipated 10-for-1 reverse stock split). The common stock was issued pursuant to an exemption from registration under Section 4(2) of the Securities Act

On September 6, 2011, RP Capital and Richardson and Patel, LLP, two entities holding warrants (one as a result of the Financing and the other as a part of a payment arrangement for services) tendered and exercised their warrants and received 244,897 and 188,225 shares of the Company's common stock (24,490 and 18,823 shares, respectively, upon giving effect to the anticipated 10-for-1 reverse stock split). The common stock was issued pursuant to an exemption from registration under Section 4(2) of the Securities Act.

On September 6, 2011, the Company issued 202,703 shares of common stock (20,270 shares upon giving effect to the anticipated 10-for-1 reverse stock split) to legal counsel, Richardson and Patel, LLP, in settlement of accounts payable for services rendered. The issuance of these securities was exempt from registration under Section 4(2) and Regulation

D of the Securities Act.

On November 4, 2010, RP Capital elected to convert the balance of its 9% secured convertible note in the amount of \$100,000 into 625,384 shares of our common stock (62,538 shares of common stock upon giving effect to the anticipated 10-for-1 reverse split). RP Capital also received an additional five-year warrant to purchase up to 62,538 shares of common stock, at an exercise price of \$0.75 per share (6,254 shares of common stock, at an exercise price of \$7.50 upon giving effect to the anticipated 10-for-1 reverse split) in consideration for converting its 9% secured convertible note. The warrant is immediately exercisable and subject to adjustment for standard anti-dilution events.

On February 19, 2010, we obtained \$620,000 of financing from RBC Capital Markets Corporation Custodian for Leonard Samuels IRA ("RBC") in the form of an unsecured, interest-bearing note, due May 31, 2011 (the "Note"). The Note bears interest at 10% per annum. In connection with the loan, we granted RBC the right to participate in our subsequent financings until the maturity date (the "Right of Participation"). The Right of Participation entitles RBC the right to participate in subsequent financings up to the unpaid amount of the Note in such applicable subsequent financing. We agreed not to incur additional debt exceeding \$500,000 during the Term of the Note without the note holder's consent. On May 12, 2011, RBC elected to apply all of the proceeds due and payable pursuant to this note, in the principal amount of \$620,000 plus accrued interest, to purchase our common stock. Pursuant to this transaction, RBC subscribed for and purchased 2,667,503 shares of common stock at a purchase price of \$0.26 per share (266,750 shares of common stock upon giving effect to the anticipated 10-for-1 reverse split) resulting in an aggregate purchase price of \$693,550 (the principal amount and related accrued interest under the note). As part of the purchase, RBC also received a five-year warrant to purchase 962,500 shares of Common Stock, at an exercise price of \$0.45 per share (96,250 shares of common stock at an exercise price of \$4.50 after giving effect to the anticipated reverse split). The warrants are immediately exercisable and subject to adjustment for standard anti-dilution events, including but not limited to stock dividends, split-up, reclassification or combination of our shares, exchange of stock for other Company stock, or certain capital reorganizations or reclassification of the capital stock or consolidation, merger or sale of substantially all our assets. In addition, as part of this transaction, the warrants issued to this investor on December 20, 2007 and December 31, 2007 were amended to include a cashless exercise provision.

On February 19, 2010, we obtained \$250,000 of financing from Leah-Kaplan and Leonard Samuels ("Samuels") in the form of an unsecured, interest bearing note, payable in full one June 30, 2010 (the "Note"). The Note bears interest at 10% per annum. In connection with the loan, we granted Samuels the right to participate in our subsequent financings until the maturity date. The maturity date of the note was extended to December 31, 2010. On December 27, 2010, the holders elected to apply all of the proceeds due and payable under the Note, including all accrued interest, to purchase our common stock. Pursuant to this transaction, the Samuels subscribed for and purchased 1,052,950 shares of common stock at a purchase price of \$0.26 per share (105,295 shares of common stock, at a purchase price of \$2.60 upon giving effect to the anticipated 10-for-1 reverse split) resulting in an aggregate purchase price of \$273,767 (the principal amount and related accrued interest under the note).

In December, 2009, we obtained \$1,000,000 of financing from Platinum-Montaur Life Sciences, LLC ("Investor"). Mark Nordlich, who is a significant beneficial holder of our securities, is a control person with respect to the Investor. Pursuant to the terms of the note, we are to pay the holder simple interest at the rate of ten percent per annum commencing on the date of issuance with all interest and principal due and payable in cash on or before June 17, 2010. The note's maturity date was extended to April 30, 2011. On March 22, 2011, the Company entered into a Securities Amendment and Exchange Agreement and an Amended and Restated Convertible Promissory Note ("2011 Convertible Note", collectively "Exchange Agreements") with this investor. Pursuant to the terms and subject to the conditions set forth in the Exchange Agreements, the Company and the Investor amended and restated the \$1,000,000 unsecured promissory note issued by the Company to Investor on or about December 17, 2009 ("Original Note") to, among other things, extend the term to March 22, 2012. Interest in the amount of 10% per annum, commencing on December 17, 2009 and calculated on a 365 day year, and the principal amount of \$1,000,000 will be paid on March 22, 2012. Subject to the terms and conditions of the 2011 Convertible Note, including limitations on conversion, the outstanding principal and interest under the 2011 Convertible Note will automatically convert into shares of the Company's common stock at the then-effective conversion price upon the closing of a qualified firm commitment underwritten public offering or may be voluntarily converted by the investor at anytime during the term. The initial conversion price is \$0.26 per share (\$2.60 upon giving effect to the anticipated 10-for-1 reverse stock split). Any principal or interest which is not converted will be repaid by the Company at the earlier of a qualified offering, (as defined in the 2011 Convertible Note which is filed as an exhibit to the Form 8K filed with the Securities and Exchange Commission on March 28, 2011), or March 22, 2012. Pursuant to and during the term of the 2011 Convertible Note, the Company will not issue or allow to exist any obligation for borrowed money, except for subordinate indebtedness in payment and priority, trade payables incurred in the ordinary course of business, purchase money secured indebtedness for equipment or inventory, unsecured and subordinate, or unsecured and subordinate working capital guarantees provided by, the Export Import Bank of the United States (the "EXIM Bank"), and indebtedness evidenced by the promissory note dated February 19, 2010 issued to RBC Capital Markets- Custodian of Leonard Samuels IRA (as amended) in the principal amount of \$620,000. In addition, on March 22, 2011, in connection with the above Exchange Agreements, the Company entered into an Amendment to 2007 Warrant and an Amendment to 2009 Warrant to extend the terms of the Stock Purchase Warrant, dated on or about December 31, 2007, and Stock Purchase Warrant, dated on or about March 12, 2009, respectively, to March 22, 2016 and to provide for cashless exercise unless such warrant shares are registered for resale under a registration statement. In addition, on March 22, 2011, the Company issued a Stock Purchase Warrant to the Investor to purchase 1,000,000 shares of the Company's common stock at \$0.45 per share (100,000 shares of the Company's common stock at an exercise price of \$4.50 per share upon giving effect to the anticipated 10-for-1 reverse split), exercisable commencing on the earliest of the consummation of the qualified offering (as defined in the Exchange Agreements), the date of conversion of the 2011 Convertible Note in full, or the date of conversion of the 2011 Convertible Note by the Investor in the greatest number of shares of the Company's common stock not to exceed 9.99% beneficial ownership of Company outstanding common stock and terminating on March 22, 2016.

Also, on March 22, 2011, the Company entered into a 10% Note and Warrant Purchase Agreement, Secured Convertible Promissory Note and Patent Security Agreement ("Financing Agreements") with the above Investor. Pursuant to the terms and subject to the conditions set forth in the Financing Agreements, the Investor has provided a bridge loan in the amount of \$1,500,000 ("Loan") to the Company, which is secured by all patents, patent applications and similar protections of the Company and all rents, royalties, license fees and "accounts" with respect to such intellectual property assets. Pursuant to the Secured Convertible Promissory Note ("Secured Note"), interest in the amount of 10% per annum, calculated on a 365 day year, and the principal amount of \$1,500,000 is due and payable on March 22, 2012, but repayment is accelerated upon a qualified offering (as defined in the note). In the event of such qualified offering, and subject to the terms and conditions of the Secured Note, the outstanding principal and interest under the Secured Note will automatically convert, subject to the limitations on conversion described in the note, into shares of the Company's common stock at the then-effective conversion price upon the closing of such qualified offering. The initial conversion price is \$0.26 per share (\$2.60 upon giving effect to the anticipated 10-for-1 reverse stock split) which is subject to adjustment for standard anti-dilution provisions. Any principal or interest which is not converted will be repaid by the Company at the earlier of a qualified offering or March 22, 2012. No cash fees were paid to any party to the transaction in exchange for lending the money.

On March 22, 2011, in connection with the Financing Agreements, the Company issued a Stock Purchase Warrant to the Investor to purchase 3,000,000 shares of the Company's common stock at \$0.45 per share (300,000 shares of the Company's common stock at an exercise price of \$4.50 per share upon giving effect to the anticipated 10-for-1 reverse split), exercisable until March 22, 2016. Pursuant to and during the term of the Secured Note, the Company will not issue or permit to exist any obligation for borrowed money, except for trade payables incurred in the ordinary course of business, purchase money secured indebtedness for equipment or inventory, unsecured and subordinate indebtedness to, or unsecured and subordinate working capital guarantees provided by, the EXIM Bank, the promissory note dated February 19, 2010 issued to RBC Capital Markets- Custodian of Leonard Samuels IRA (as amended) in the principal amount of \$620,000, the Amended and Restated Convertible Promissory Note, dated March 22, 2011, issued to the Investor in the principal amount of \$1,000,000 and other unsecured indebtedness for borrowed money in an amount not to exceed \$750,000.

Pursuant to the Patent Security Agreement issued in connection with the Note and Warrant Purchase of March 22, 2011, the Company shall not, without the Investor's prior consent, sell, dispose or otherwise transfer all or any portion of the Collateral, except for license grants in the ordinary course of business. In addition, the Company will take all actions reasonably necessary to prosecute applications for patents and maintain all patents, and to seek to recover damages for infringement, misappropriation or dilution of the Collateral with limited exceptions.

On December 8, 2009, Company obtained \$300,000 of financing from Michael Gostomski ("Gostomski") in the form of an unsecured, interest bearing note, due January 16, 2011 (the "Note"). The Note bears interest at 7% per annum. On December 30, 2010, the holder elected to apply all of the proceeds due and payable under the Note, including all accrued interest, to purchase the Company's Common Stock. Pursuant to this transaction, Gostomski subscribed for and purchased 1,268,472 shares of Common Stock at a purchase price of \$0.26 per share (126,847 shares of the Company's common stock at an exercise price of \$2.60 per share upon giving effect to the anticipated 10-for-1 reverse stock split), resulting in an aggregate purchase price of \$329,402.

On November 23, 2009, Michael Stone elected to convert the interest accrued on his 9% secured convertible note in the amount of \$34,027 into 170,137 shares of our common stock (17,014 shares of the Company's common stock upon giving effect to the anticipated 10-for-1 reverse stock split). The note was modified so as to end accrual of interest on November 20, 2009.

On October 9, 2009, Leonard and Leah Kaplan Samuels JTWROS and RBC Capital- Custodian for Leonard Samuels IRA elected to convert their 9% secured convertible notes and the related accrued interest in the amounts of \$174,349 and \$638,693 into 871,746 and 3,193,466 shares of our common stock, respectively (87,175 and 319,347 shares our common stock, respectively, upon giving effect to the anticipated 10-for-1 reverse stock split). Said investors also received an additional five-year warrant to purchase up to 75,000 and 275,000 shares, respectively, of common stock, at an exercise price of \$0.75 per share (7,500 and 27,500 shares, respectively, of common stock, at an exercise price of \$7.50 per share upon giving effect to the anticipated 10-for-1 reverse stock split) in consideration for converting their 9% secured convertible note. The warrant is immediately exercisable and subject to adjustment for standard anti-dilution events.

On September 17, 2009, we entered into subscription agreements with Leonard and Leah Kaplan Samuels pursuant to which the investors purchased 800,000 shares of our common stock (80,000 shares of our common stock upon giving effect to the anticipated 10-for-1 reverse stock split). As part of the purchase, the Samuels received a five year warrant to purchase 80,000 shares of Common Stock, at an exercise price of \$0.75 per share (8,000 shares of our common stock at an exercise price of \$7.50 upon giving effect to the anticipated 10-for-1 reverse stock split). The aggregate gross proceeds received by us for the sale was \$200,000. The warrants are immediately exercisable and subject to adjustment for standard anti-dilutions events.

On September 11, 2009, to evidence a loan, we issued Timothy N. Tangredi a promissory note in the principal amount of \$124,000. The note is unsecured and bears a simple interest rate of 9% per annum. This note was paid in full prior to October 15, 2009.

On September 11, 2009, to evidence a loan, we issued a promissory note in the principal amount of \$37,000 to Ethos Business Ventures. Our CEO, Mr. Tangredi, is a principal owner of this entity. The note is unsecured and bears a simple interest rate of 9% per annum. This note was paid in full prior to October 15, 2009.

On June 30, 2009, we entered into a subscription agreement with the Louis M. Jaffe 2004 Intangible Asset Trust U/A DTD 5/24/04 pursuant to which the trust purchased 596,154 shares of Company's Common Stock and a five year warrant to purchase an additional 298,078 shares of Common Stock at an exercise price of \$0.26 per share (59,615 shares of Company's Common Stock and a five year warrant to purchase an additional 29, 808 shares of Common Stock at an exercise price of \$2.60 per share upon giving effect to the anticipated 10-for-1 reverse stock split). The aggregate gross proceeds received by Company for this sale was \$155,000. The warrants are immediately exercisable and subject to adjustment for standard anti-dilution events.

On June 10, 2009, to evidence a loan, we issued a promissory note in the principal amount of \$10,000 to Ethos Business Ventures, an entity in which our Chief Executive Officer holds a position. The note is unsecured and bears a

simple interest rate of 9% per annum. The note was paid in full July of 2009.

On May 21, 2009, to evidence a loan, we issued our Chief Executive Officer a promissory note in the principal amount of \$51,900. The note is unsecured and bears a simple interest rate of 9% per annum. The note was paid in full prior to July 31, 2009. On April 30, 2009, the Company issued a five year warrant to purchase 250,000 shares of Common Stock at an exercise price of \$0.26 per share (25,000 shares of Common Stock at an exercise price of \$2.60 per share upon giving effect to the anticipated 10-for-1 reverse stock split) pursuant to Louis Jaffe pursuant to a consulting agreement. The warrants are immediately exercisable and subject to adjustment for standard anti-dilution events.

On April 30, 2009, MSSRPS, Inc. elected to convert its 9% secured convertible note and the related accrued interest in the amounts of \$167,125 into 835,623 shares of common stock (83,562 shares of Common Stock upon giving effect to the anticipated 10-for-1 reverse stock split). This investor also received an additional warrant to purchase up to 249,750 shares of common stock at an exercise price of \$0.25 per share (24,975 shares of common stock at an exercise price of \$2.50 per share upon giving effect to the anticipated 10-for-1 reverse stock split) in consideration for converting its 9% secured convertible note. The warrant is immediately exercisable and subject to adjustment for standard anti-dilution events.

On April 6, 2009 the Louis M. Jaffe 2004 Intangible Asset Trust U/A DTD 5/24/04 elected to convert its 9% secured convertible notes and the related accrued interest in the amounts of \$110,849 into 554,247 shares of common stock (55,425 shares of Common Stock upon giving effect to the anticipated 10-for-1 reverse stock split). This investor also received an additional warrant to purchase up to 166,500 shares of common stock at an exercise price of \$0.25 per share (16,650 shares of common stock at an exercise price of \$2.50 per share upon giving effect to the anticipated 10-for-1 reverse stock split) in consideration for converting its 9% secured convertible note. The warrant is immediately exercisable and subject to adjustment for standard anti-dilution events.

On March 9, 2009, we entered into a subscription agreement Michael Gostomski pursuant to which Mr. Gostomski purchased 576,923 shares of common stock and a five year warrant to purchase an additional 288,462 shares of common stock at an exercise price of \$0.26 per share (57,692 shares of common stock and a five year warrant to purchase an additional 28,846 shares of common stock at an exercise price of \$2.60 per share upon giving effect to the anticipated 10-for-1 reverse stock split). The aggregate gross proceeds received by us for this sale was \$150,000. The warrant is immediately exercisable and subject to adjustment for standard anti-dilutions events.

On February 16, 2009, and March 12, 2009, Michael Gostomski and Platinum Montaur Life Sciences, L.L.C.; respectively, elected to convert their 9% secured convertible notes and the related accrued interest in the amounts of \$83,007 and \$664,948 into 415,038 and 3,324,740 shares of common stock, respectively (41,504 and 332,474 shares of common stock, respectively upon giving effect to the anticipated 10-for-1 reverse stock split). Such investors also received an additional warrant to purchase up to 124,875 and 999,000 shares of common stock, respectively, at an exercise price of \$0.25 per share (12,488 and 99,900 shares of common stock, respectively, and \$2.50 per share upon giving effect to the anticipated 10-for-1 reverse stock split) in consideration for converting their 9% secured convertible note. The warrants are immediately exercisable and subject to adjustment for standard anti-dilution events.

In August 2008, we issued a five year warrant to purchase 250,000 shares of common stock (25,000 shares of Common Stock upon giving effect to the anticipated 10-for-1 reverse stock split) to Scott Ehrenberg our Chief Technology Officer and Secretary, in recognition for Mr. Ehrenberg's achievement of certain company goals. The fair value of the warrant issued is approximately \$49,000. The warrant vested upon issuance and has an exercise price of \$0.30 per share (\$3.00 per share upon giving effect to the anticipated 10-for-1 reverse stock split).

In April 2008, we issued a warrant to purchase 3,000,000 shares of common stock at an exercise price of \$0.36 per share (300,000 shares of Common Stock at an exercise price of \$3.60 upon giving effect to the anticipated 10-for-1 reverse stock split) to Mr. Tangredi in recognition for Mr. Tangredi's achievement of the following goals: negotiating

conversion of the convertible notes issued in the Additional Financing, securing a release with respect to the consulting agreement with Gray Capital Partners, Inc. and securing and closing upon the Financing. The fair value of the warrant issued is approximately \$687,000.

In June 2008 we agreed to issue and have since issued 100,000 shares of common stock (10,000 shares of Common Stock upon giving effect to the anticipated 10-for-1 reverse stock split) to Gemini Strategies, LLC in connection with consulting services. The fair value of the equity instruments issued for these services is approximately \$51,000. Gemini Strategies, LLC is related to Gemini Master Fund Ltd., a convertible note holder.

In February of 2008, we issued 20,000 shares of our common stock (2,000 shares of Common Stock upon giving effect to the anticipated 10-for-1 reverse stock split) to an employee for cash consideration of \$2,000 upon the exercise of a stock option granted under our 2000 Plan. The shares were issued in reliance upon an exemption for registration under Rule 701.

In January 2008 we closed on an aggregate of \$2,950,000 in gross proceeds from the private sale to 21 accredited investors of 9% secured convertible notes and warrants to purchase 14,750,000 shares of our Common Stock at an exercise price of \$0.25 per share (1,475,000 shares of Common Stock at an exercise price of \$2.50 per share upon giving effect to the anticipated 10-for-1 reverse stock split). Pursuant to the terms of this financing we granted the investors a security interest in certain of our assets. We entered into an agreement with placement agent, Legend Merchant Group, Inc. on October 5, 2007 pursuant to which, Legend Merchant Group, Inc. received a cash commission equal to 8% of the gross proceeds raised by Legend Merchant (and its subagent), which totaled \$2,800,000, plus a warrant equal to 10% of the number of shares of common stock underlying certain warrants issued to convertible note holders, or 1,400,000 at \$0.25 per share (140,000 shares at \$2.50 per share upon giving effect to the anticipated 10-for-1 reverse stock split).

We also have accrued compensation due to the Chief Executive Officer and one other employee for deferred salaries earned and unpaid as of June 30, 2011 and December 31, 2010, 2009 and 2008 of \$1,405,190, \$1,426,022, \$1,314,356 and \$1,147,389, respectively.

#### **Employment Agreements**

In addition we have the following employment agreements with our officers and significant employees:

Timothy N. Tangredi. We are party to an employment agreement with Mr. Tangredi, our President, Chief Executive Officer, and director. The employment agreement, as amended and restated on September 14, 2011, sets forth Mr. Tangredi's compensation level and eligibility for salary increases, bonuses, benefits, and option grants. Mr. Tangredi's employment agreement provides for an initial term of three years commencing on September 14, 2011 with the term extending on the second anniversary thereof for an additional two-year period and on each subsequent anniversary of the commencement date for an additional year period. Mr. Tangredi's initial base salary is \$200,000. Mr. Tangredi's base salary shall be increased annually, if applicable, by a sum equal to his current base salary multiplied by one third of the percentage increase in our yearly revenue compared to our prior fiscal year revenue; provided however any annual increase in Mr. Tangredi's base salary shall not exceed a maximum of 50% for any given year. Any further increase in Mr. Tangredi's base salary shall be at the sole discretion of our board of directors or compensation committee (if applicable). Additionally, at the discretion of our board of directors and its compensation committee, Mr. Tangredi may be eligible for an annual bonus, if any, of up to 100% of his then-effective base salary, if he meets or exceeds certain annual performance goals established by the board of directors. In addition to this bonus, Mr. Tangredi may be eligible for a separate merit bonus if approved by the board of directors, for specific extraordinary events or achievements such as a sale of a division, major license or distribution arrangement or merger. Mr. Tangredi is entitled to medical, disability and life insurance, as well as four weeks of paid vacation annually, an automobile allowance, reimbursement of all reasonable business expenses, automobile insurance and maintenance, and executive conference or educational expenses.

Under his employment agreement, in addition to any other compensation which he may receive, if we complete the offering Mr. Tangredi will be granted an option under our 2009 Plan to purchase up to 520,000 shares of our common stock (52,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) with an exercise price equal to the fair market value per share on the date of grant. This option will become vested and exercisable in thirds, with one third vested upon grant, another third at the one-year anniversary of the grant, and another third upon the second anniversary of the grant. The option shall have a term of ten years, shall be exercisable for up to three years after termination of employment (unless termination is for cause, in which event it shall expire on the date of termination), shall have a "cashless" exercise feature, and shall be subject to such additional terms and conditions as are then applicable to options granted under such plan provided they do not conflict with the terms set forth in the agreement.

If Mr. Tangredi's employment is terminated for any reason, we will be obligated to pay him his accrued but unpaid base salary, bonus and accrued vacation pay, and any unreimbursed expenses ("Accrued Sums").

In addition to any Accrued Sums owed, if Mr. Tangredi's employment is terminated by us in the event of his disability or without cause or by Mr. Tangredi for good reason, he shall be entitled to:

- (i) an amount equal to the sum of (A) the greater of 150% of the base salary then in effect or \$320,000 plus (B) the cash bonus and/or merit bonus, if any, awarded for the most recent year;
- (ii) health and life insurance, a car allowance and other benefits set forth in the agreement until two years following termination of employment, and thereafter to the extent required by COBRA or similar statute; and
- (iii) all stock options, to the extent they were not exercisable at the time of termination of employment, shall become exercisable in full.

In addition to any Accrued Sum owed, in the event of termination upon death, Mr. Tangredi shall be entitled to (i) and (iii) above.

In addition to any Accrued Sums owed, in the event that Mr. Tangredi elects to terminate employment within one year following a change in control, he shall receive a lump sum payment equal to the sum of (a) the greater of his then current base salary or \$210,000 plus (b) the cash bonus and merit bonus, if any, awarded in the most recent year. In addition, he will be entitled to (ii) and (iii) above.

The employment agreement also contains customary covenants restricting the use of our confidential information and solicitation of employees, which are similarly applicable to our other executive officers. In addition we are obligated to indemnify Mr. Tangredi for any claims made against him in connection with his employment with us, to advance indemnification expenses, and maintain his coverage under our directors' and officers' liability insurance policy.

Under the employment agreement, we and Mr. Tangredi have agreed that we will retain an independent compensation consultant, whose recommendations shall be obtained by January 31, 2012 which may modify the compensation program for Mr. Tangredi and other officers, subject to certain conditions including approval of the board of directors. Notwithstanding the recommendation and board consideration, Mr. Tangredi has the right to continue the current terms of the employment agreement.

Scott G. Ehrenberg.We are party to an employment agreement with Mr. Ehrenberg, our Chief Technology Officer and Secretary. The employment agreement, dated May 24, 2011, sets forth Mr. Ehrenberg's compensation level and eligibility for salary increases, bonuses, benefits, and option grants. Mr. Ehrenberg's employment agreement provides for an initial term of two years with the term extending on the second anniversary thereof for an additional one year period and on each subsequent anniversary of the agreement for an additional year period. Mr. Ehrenberg's initial base salary is \$110,000, with an increase to \$165,000 per annum. Additionally, at the discretion of our board of directors and its compensation committee, Mr. Ehrenberg may be eligible for an annual bonus which amount, if any, will not be below 50% of his effective base salary and not exceeding 100% of his then effective base salary; provided that, under certain extraordinary circumstances, Mr. Ehrenberg may be eligible for an annual bonus greater than 150% of his then-effective base salary. Mr. Ehrenberg is entitled to medical, disability and life insurance as generally offered to other and made available to other executive officers of the Company, and after the completion of this offering, 75% of the regular portion of Executive's Health Benefit. In addition, Mr. Ehrenberg is entitled to four weeks of paid vacation annually, and reimbursement of certain business expenses including expenses for executive conferences or education.

After the completion of this offering, Mr. Ehrenberg is eligible to receive a one-time payment of \$20,000 for each U.S. patent of which he is the originator and the first name listed on the patent as inventor of the intellectual property described in such patent. In addition to any other compensation which Mr. Ehrenberg may receive under the agreement, he will be granted options to purchase 40,000 shares of common stock (4,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) at the end of each year or on the annual anniversary of the agreement, whichever is mutually acceptable to the Company and Mr. Ehrenberg. These options will be immediately exercisable, have a term of ten years, shall be exercisable for up to three years after termination of or resignation from employment (unless termination is for cause, in which event they shall expire on the date of termination).

If Mr. Ehrenberg's employment is terminated for any reason, we will be obligated to pay him his accrued but unpaid base salary, bonus and accrued vacation pay, and any unreimbursed expenses ("Accrued Sums").

In addition to any Accrued Sums owed, if Mr. Ehrenberg's employment is terminated by us in the event of his disability or without cause or by Mr. Ehrenberg for good reason, he shall be entitled to:

- (i) an amount equal to the greater of the base salary then in effect or \$175,000;
- (ii) continuation of medical benefits set forth in the agreement until one year following termination of employment or resignation, and beyond such one year period to the extent required by COBRA or similar statute; and
- (iii) all stock options, to the extent they were not exercisable at the time of termination of employment, shall become exercisable in full, and shall remain exercisable for a period of three years following the date of termination or resignation.

In addition to any Accrued Sum owed, in the event of termination upon death, Mr. Ehrenberg shall be entitled to (i) and (iii) above.

In addition to any Accrued Sums owed, in the event that Mr. Ehrenberg elects to terminate employment following a change in control, he shall be entitled to receive, within the later of ten days following the date on which the change in control occurs or the date on which he gives notice of his election to resign from employment, a lump sum payment equal to \$400,000 plus cash bonus and equity, if any, awarded to Mr. Ehrenberg for the most recent year. In addition, he will be entitled to (ii) and (iii) above.

The employment agreement also contains customary covenants restricting the use of our confidential information and solicitation of employees, which are similarly applicable to our other executive officers. In addition we are obligated to indemnify Mr. Ehrenberg for any claims made against him in connection with his employment with us, to advance indemnification expenses, and maintain his coverage under our directors' and officers' liability insurance policy.

Patricia K. Tangredi. We are a party to an employment agreement with Patricia Tangredi, wife of Timothy Tangredi, our Chief Executive Officer. The employment agreement, as amended and restated on April 8, 2011, sets forth Ms. Tangredi's compensation level and eligibility for salary increases, bonuses, benefits, and option grants. Ms. Tangredi's employment agreement provides for an initial term of four years with the term extending on the fourth anniversary thereof for an additional one year period and on each subsequent anniversary of the agreement for an additional year period. Ms. Tangredi's initial base salary is \$120,000, with an increase to \$150,000 per annum or such higher sum as our board of directors may set after the date on which we obtain \$10 million or more in equity or debt financing. Ms. Tangredi is entitled to, and we will pay 50% of her, medical, vision, dental, accidental death and travel insurance as provided under company plans. In addition, Ms. Tangredi is eligible to receive four weeks of paid vacation annually.

In addition to any other compensation which she may receive under the agreement, Ms. Tangredi shall be granted options to purchase a minimum of 50,000 shares of our common stock (5,000 shares upon giving effect to the anticipated 10-for-1 reverse stock split) which shall be issued at year end or upon the anniversary of this agreement, as the parties shall agree. These options shall be immediately exercisable, have a term of ten years, shall be exercisable for up to three years after termination of employment (unless termination is for cause, in which event they shall expire on the date of termination), and shall be subject to such additional terms and conditions as are then applicable to options granted under such plan provided they do not conflict with the terms set forth in the agreement.

If Ms. Tangredi's employment is terminated for any reason, we will be obligated to pay her accrued but unpaid base salary, bonus and accrued vacation pay, and any unreimbursed expenses ("Accrued Sums").

In addition to any Accrued Sums owed, if Ms. Tangredi's employment is terminated by us in the event of her disability or without cause or by Ms. Tangredi for good reason, Ms. Tangredi shall also be entitled to:

- (i) an amount equal to the greater of the base salary then in effect or \$150,000;
- (ii) continuation of the health and other insurance coverage and other benefits set forth in the agreement until one year following termination of employment or resignation, and beyond such one year period to the extent required by COBRA or similar statute; and
- (iii) all stock options, to the extent they were not exercisable at the time of termination of employment, shall become exercisable in full and shall remain exercisable for a period of three years following the date of termination or resignation.

In addition to any Accrued Sum owed, in the event of termination upon death, Ms. Tangredi shall be entitled to (i) and (iii) above.

In addition to any Accrued Sums owed, in the event that Ms. Tangredi elects to terminate employment within six months following a change in control, she shall receive a lump sum payment equal to three times the sum of the greater of her then current base salary or \$150,000. In addition, she will be entitled to (ii) and (iii) above.

The employment agreement also contains customary covenants restricting the use of our confidential information and solicitation of employees, which are similarly applicable to our other executive officers. In addition we are obligated to indemnify Ms. Tangredi for any claims made against her in connection with her employment with us, to advance indemnification expenses, and maintain her coverage under our directors' and officers' liability insurance policy.

**Executive Compensation Agreement** 

On September 14, 2011, we entered into an Executive Compensation Agreement with Tim Tangredi. Under this agreement, upon closing of the offering Mr. Tangredi's accrued compensation through the closing date in the approximate amount of \$1.05 million shall be paid with a combination of (a) cash, which we estimate at this time to be approximately \$380,000, which is intended to cover payment of income and other taxes due from the payment of such accrued compensation, and (b) shares of restricted common stock at a price equal to the price per share paid by investors in the public offering, for the remainder (which is assumed for purposes of this calculation to be \$4.00 per share after giving effect to the anticipated 10-for-1 reverse stock split, and based on this assumption would consist of approximately 166,971 shares of common stock).

There are no material relationships between us and our directors or executive officers except as previously discussed herein.

Since the beginning of our 2008 fiscal year, we have not been a participant in any transaction, or proposed transaction, not disclosed herein in which any related person had or will have a direct or indirect material interest and in which the amount involved exceeds the lesser of \$120,000 or one percent of our total assets at year end for the last two completed fiscal years.

# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Summary Financial Data" and our financial statements and related notes appearing elsewhere in this prospectus. In addition to historical information, this discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including, but not limited, to those set forth under "Risk Factors" and elsewhere in this prospectus.

#### **OVERVIEW**

We have developed and patented a nano-structure polymer technology, which is being commercialized in products based on the functionality of these materials. We believe the applications of our technology have promise in a number of diverse market segments and products.

The initial product focus of the Company is ConsERV<sup>TM</sup>, an energy recovery ventilator. Our primary focus is to expand our marketing and sales of our ConsERV<sup>TM</sup> product.

We also have new product applications in various stages of developmental. We believe that three of these product applications, including an advanced air conditioning system which is projected to be more energy efficient and have lower emissions compared to current HVAC equipment, a sea-water desalination product and an electrical energy storage device, may be brought to market in the foreseeable future if we receive adequate capital funding.

#### **REVENUES**

We generate our revenues primarily from the sale of our ConsERV<sup>TM</sup> products in largely commercial HVAC markets with a small amount of revenues coming from residential sales to consumers and HVAC distributors. Sales channels for our ConsERV<sup>TM</sup> products include OEMs, distributors, retailers, and consumers. We also occasionally look to license our technology to strategic partners and sell various prototypes of other product applications that use our polymer technology.

Our near term revenue growth is dependent on continued sales from (i) more seasoned independent sales representatives, (ii) a greater number of independent sales representatives, (iii) fulfilling the ventilation needs of the growing "energy consultant" marketplace which work to lower their client's energy costs and emissions, and (iv) from the Company's own 'customer direct' sales activities, all of which focus on the sale of products primarily to commercial users with a growing emphasis on low rise structures (small commercial buildings, multi-purpose structures, and residences). In addition, we and our independent sales representative sales force will work to secure orders for ConsERV<sup>TM</sup> "core only" sales from HVAC equipment manufacturers, and from distribution firms servicing the equipment needs of the