UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

FOR ANNUAL AND TRANSITION REPORTS PURSUANT TO SECTIONS 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

☐ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended December 31, 2003

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

000-31083
(Commission File Number)

MILLENNIUM CELL INC.
(Exact Name Of Registrant As Specified In Its Charter)

Delaware	**22-3726792**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification Number)**
1 Industrial Way West, Eatontown, New Jersey	**07724**
(Address Of Principal Executive Offices)	**(Zip Code)**

(732) 542-4000
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act: Common Stock, $.001 par value per share

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes ☐ No ☒

The aggregate market value of the registrant's common stock held by non-affiliates as of March 1, 2004 was $74,397,268.

The number of shares outstanding of the registrant's common stock as of March 1, 2004 was 35,374,906.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement dated March 18, 2004 to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held on April 15, 2004 are incorporated by reference into Part III.

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This report contains forward-looking statements (within the meaning of the Private Securities Litigation Reform Act of 1995) that are subject to risks and uncertainties. Statements contained herein that are not statements of historical fact may be deemed to be forward-looking information. When we use words such as "plan," "believe," "expect," "anticipate," "intend" or similar expressions, we are making forward-looking statements. You should not rely on forward-looking statements because they are subject to a number of assumptions concerning future events, and are subject to a number of uncertainties and other factors, many of which are outside of our control, that could cause actual results to differ materially from those indicated. Please note that we disclaim any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise. These factors include, but are not limited to, the following: (i) the cost and timing of development and market acceptance of, and the availability of components and raw materials required by a hydrogen fuel storage and delivery system, (ii) competition from current, improving and alternate power technologies, (iii) our ability to raise capital at the times, in the amounts and at costs and terms that are acceptable to fund our business plan, (iv) our ability to protect our intellectual property, (v) our ability to achieve budgeted revenue and expense amounts, (vi) our ability to generate revenues from the sale or license of, or provision of services related to, our technology , (vii) our ability to form strategic alliances or partnerships to help promote our technology and achieve market acceptance, (viii) our ability to generate design, engineering, or management services revenue opportunities in the hydrogen generation or fuel cell markets, and (ix) other factors discussed herein under the caption "Investment Considerations" and other factors detailed from time to time in our filings with the Securities and Exchange Commission.

PART I

Item 1. Business.

General

We were formed as a Delaware limited liability company in 1998, organized and began operations on January 1, 1999 and converted into a Delaware corporation on April 25, 2000. We are an emerging technology company engaged in the business of developing innovative fuel systems for the safe storage, transportation and generation of hydrogen for use as an energy source. We license enabling technologies for the hydrogen economy.

Our Hydrogen Storage and Delivery Technology

We have developed and patented a proprietary system called *Hydrogen on Demand*™, which safely generates hydrogen from environmentally friendly raw materials. Our technology can be used to generate hydrogen for use by fuel cells in the production of electricity, generate hydrogen for use by modified internal combustion engines, and provide hydrogen for other industrial purposes. In the proprietary process, the energy potential of hydrogen is carried in the chemical bonds of sodium borohydride, which in the presence of a catalyst, releases hydrogen. The primary input components of the reaction are water and sodium borohydride, a high-energy substance made from borax. Borax is a mineral found in substantial natural reserves globally. According to Rio Tinto Borax, the world's leading borax miner, there is enough borax available in the world today to provide for the most aggressive projections for use of sodium borohydride in *Hydrogen on Demand*™.

We believe Millennium Cell is unique among hydrogen fuel companies because our technology is scalable to applications from small (cellular phones, personal digital assistants, notebook PCs) to large (auxiliary power units, stationary power, automobiles), when the demands for volumetric energy density are particularly difficult.

In its simplest form, our sodium borohydride technology provides the ability to store and transport hydrogen in a liquid or solid form. Because hydrogen provides the energy used by fuel cells to create electricity, *Hydrogen on Demand*™ technology enables the transport and use of clean electricity as a liquid or solid — safely and conveniently. To put this in another perspective, an

aqueous solution containing 35% by weight sodium borohydride and water used as the hydrogen source to power a fuel cell can have an energy density that is equal to or greater than that of the same volume of gasoline consumed in an internal combustion engine.

Our solution of sodium borohydride in water creates a fuel that delivers a non-flammable, energy dense and convenient source of hydrogen to power fuel cells or internal combustion engines. To generate hydrogen, the fuel makes contact with a catalyst. The catalyst is typically a non-volatile metal that may include ruthenium and/or cobalt. Once in contact with the catalyst, the sodium borohydride reacts to generate pure hydrogen gas, in a controllable, heat-releasing reaction, which can be used immediately or stored in a tank. The byproducts of our hydrogen-generating process are primarily heat and borax, a type of sodium borate, which can be recycled to form sodium borohydride or other useful products.

The hydrogen-generating chemical reaction used in our process eliminates the on-board pollutants and undesirable emissions of typical hydrocarbon-based power systems, which combust fossil fuels such as gasoline, natural gas and diesel. Furthermore, no pollutants are released as a result of our hydrogen-generating chemical reaction. Sodium borohydride-based energy systems have favorable energy density, power-to-weight and volume characteristics when compared to the mobile hydrogen power sources now in use.

We have used our hydrogen generation system to fuel an operating series-hybrid sports utility vehicle and two other vehicles, including a fuel cell vehicle and a former New York City taxicab that burns hydrogen in its internal combustion engine. DaimlerChrysler has incorporated our *Hydrogen on Demand*™ system into its full size, fuel cell minivan the Town and Country Natrium. PSA Peugeot Citroën debuted its H2O vehicle, powered by our *Hydrogen on Demand*™ fuel system at the Paris Auto Show in 2002. We believe that sodium borohydride fuel could be distributed for transportation purposes through refueling centers similar to today's neighborhood gasoline stations. These refueling stations will serve the dual purpose of distributing fuel and collecting the discharged fuel by product for return and regeneration.

The fueling and refueling supply chain for consumer electronics and standby applications will evolve based on customer need and convenience. Similarly, consumer's electronic power requirements are satisfied today by the purchase of self-contained solid-state disposable batteries and rechargeable battery systems. Residential and commercial power needs are met with propane tank exchange businesses and delivery of home heating oil or gases. Millennium Cell's *Hydrogen on Demand*™ technology is designed to integrate well with diverse customer fueling requirements because of the unique safety and convenience in storing, transporting, distributing, and using our water-based sodium borohydride fuel.

Advantages Over Existing Hydrogen Storage Technologies

Millennium Cell's hydrogen generation technology with its underlying characteristics of safety, portability and environmental compatibility make it an attractive alternative to existing technologies for many applications. Our core competitive advantage is that our technology solves two critical problems related to the use of hydrogen as a fuel: generation and storage. Our *Hydrogen on Demand*™ system stores the energy of hydrogen in the chemical bonds of sodium borohydride, as a dry powder or a non-flammable liquid. Hydrogen is released only when it is needed, and because it is consumed on demand, no costly storage technology is required. We believe that this is a considerable advantage when compared to other means of generating and storing hydrogen, which often require the storage of high-pressure hydrogen in bulky and potentially explosive tanks, or which consume polluting hydrocarbon fuels in high temperature reformation processes.

For consumer electronic applications, the energy density of our sodium borohydride-based hydrogen fuel offers significant runtime advantages over today's batteries. In standby power generation applications, the fuel's safety characteristics allow indoor operation and greater commercial acceptance. Current methods of storing significant amounts of hydrogen in vehicles require use of large tanks of cryogenic liquid or compressed gaseous hydrogen. For a 3,000-pound automobile to achieve a range of 300 miles using a proton exchange membrane ("PEM") fuel cell system, the

equivalent of four large tanks of compressed gaseous hydrogen at 5,000 psi would be required. These tanks take up valuable space on the vehicle that was intended for passenger and/or cargo. Both of these systems are cumbersome, voluminous and potentially hazardous, as an accident that damages a full tank of either cryogenic liquid or gaseous hydrogen might result in an extremely powerful explosion. In contrast, equivalent hydrogen storage in a *Hydrogen on Demand*™ system weighs less, requires less volume, and takes up none of the vehicle's original passenger or cargo space, while posing less flammability or explosion risk than gasoline, compressed, or cryogenic hydrogen.

Advantages of our system are both environmental and economic, as our system is not complex. Fuel cartridges for consumer electronic applications can be distributed via existing battery distribution supply chains. For future transportation markets, we envision the ability to retain much of the current infrastructure now used for distribution of transportation fuels. The recycling process to regenerate the discharged fuel into sodium borohydride is envisioned to be feed stock neutral, meaning that the least expensive locally available source of energy can be used, including natural gas, waste oil, coal, hydroelectric, geothermal, nuclear or solar energy. If carbon fuels are used in the regeneration process, the emissions associated with these fuels are concentrated locally and can be controlled as a single point source, unlike conventional gasoline burning automobiles, which scatter emissions throughout an area with no real method of control.

Hydrocarbon fuels such as gasoline, when combusted, release into the atmosphere carbon monoxide and carbon dioxide. Additional pollutants are also created, such as oxides of nitrogen — a key component of smog. By contrast, our process uses no carbon, while still taking advantage of the significant power potential of hydrogen. Neither of the reaction's byproducts, water and borax, is a pollutant. There is no "exhaust" in the conventional sense — water is harmlessly vented into the air as vapor. The byproduct captured in our system can be recycled into sodium borohydride, the key input in our process.

Fossil fuel reformers produce hydrogen from gasoline, natural gas (methane) or other fossil fuels. In contrast to *Hydrogen on Demand*™ technology, reformers provide lower purity hydrogen and create polluting emissions from the carbon, sulfur and nitrogen compounds present in the fossil fuel. Additionally, hydrogen from reformers contains carbon monoxide, which if not removed, will poison fuel cells. Reformers have high system complexity and correspondingly high capital costs. Metal hydrides are another option for storing the energy produced by hydrogen. However, metal hydride systems still require an infrastructure for hydrogen gas and require a source of heat to desorb hydrogen. Metal hydride technology is also quite heavy, making it a poor choice in applications where overall system weight is an important design factor. Electrolysis is also used to generate hydrogen from water, but provides no means of storing it. These systems also consume electricity in the process, with low conversion efficiency and are designed only for stationary use.

Market Opportunity for Our Technology

The events of September 11th underscored the need for increased energy independence in the United States and have contributed to the elevation of energy issues in national priorities. President Bush's call in the 2003 State of the Union address for increased spending to accelerate the development of the hydrogen economy, specifically the Bush Administration's FreedomCAR and Hydrogen Fuel initiative demonstrate the depth of the government's interest in fuel cell development for transportation and distributed generation. The administration has also announced a proposal for overall reduction of carbon dioxide emissions. With energy issues center stage both from a geopolitical and an environmental standpoint, the coming years should be replete with opportunities to demonstrate how *Hydrogen on Demand*™ can contribute to both national objectives: cleaner energy created within our own borders.

Government authorities in North America, Europe and Japan continue to impose stringent environmental standards generally and have increased support for the development of clean and efficient technologies to significantly improve or replace existing combustion-based technologies. While environmental considerations provided the initial impetus for automobile manufacturers to seek alternatives to the use of the internal combustion engine, we believe that these manufacturers are

beginning to recognize that fuel cell powered vehicles will provide consumers with higher fuel efficiency, lower noise and vibration, enhanced passenger comfort and performance and new vehicle design options, and potentially lower capital and maintenance costs.

An immediate market opportunity exists in the growing worldwide consumer demand for quiet, clean and environmentally friendly products in the power generation markets. Promising applications include portable power and uninterruptible power source (UPS) products for use in densely populated areas where noise pollution is a significant concern and for use indoors or in other areas where high noise and high emissions of internal combustion engine generators pose significant problems. We believe that public concern over pollution is focusing attention on the use of environmentally cleaner methods of power generation that can use non-renewable natural resources more efficiently.

Near-term markets: Consumer Electronics and Standby Power

Large, near-term market opportunities for hydrogen energy are emerging in consumer electronics and standby power. In these applications, the markets are ready now for the performance and economic advantages offered by hydrogen fuel cells enabled by *Hydrogen on Demand*™ systems over incumbent technology. Mature and vulnerable lithium ion (Li Ion) batteries limit advances in consumer electronic products. Standby power choices are limited to lead acid battery systems and gasoline, natural gas or diesel generator sets, which suffer from expensive lifecycle costs to own and operate, poor reliability, and difficult maintenance. Millennium Cell has adopted a very aggressive marketing strategy to not only capitalize on this market readiness, but also remain positioned for the long-term transportation market.

Consumer Electronics Market

We believe that the highest growth battery market segment is that which includes advanced rechargeable battery technologies powering portable consumer electronics products such as cell phones, portable computers and digital imaging devices. For these devices, hydrogen-fueled fuel cells offer the potential for longer runtimes and more convenient refueling than batteries.

Hydrogen on Demand™ systems have significant potential in these markets due to their unique safety characteristics, high energy density and low fuel and system cost. with a hydrogen fuel cell can deliver up to 3 times Li Ion battery's typical run time. *Hydrogen on Demand*™ fuel cartridges provide consumer safety in sealed, disposable packages containing non-flammable water-soluble hydrogen storage. The value of *Hydrogen on Demand*™ systems for consumer is driven by the combination of longer runtimes in a low-cost fuel cartridge will result in consumer preference over rechargeable batteries. And, fuel cells last longer and deliver more power at higher efficiency with high-purity hydrogen from *Hydrogen on Demand*™ systems vs. reformed hydrocarbon streams.

Our activities in these markets include the development of partnerships with companies who will commercialize our technology into these high value markets. Our partners include developers of compatible fuel cells, manufacturers of consumer electronics devices who are demanding longer runtimes with greater functionality in streamlined product designs, and companies whose strength in retail distribution will establish placement of fuel cartridges where consumers can conveniently purchase replacement fuel.

In April of 2003, we entered into a cooperative development agreement with Samsung Electronics Company, Ltd., headquartered in South Korea. With this agreement, Millennium Cell and Samsung began development and evaluation of fuel cartridge designs with our technology for fuel *Hydrogen on Demand*™ cell-powered consumer electronics devices. In 2004, we expect to announce several additional partnerships and to negotiate subsequent licensing agreements that will allow our partners to market our technology into the target markets.

Standby Power Markets

We believe the recent August 2003 "Northeast Blackout", which shut down several major cities in North America, and the widespread power outages caused by Hurricane Isabel in September, underscore the vulnerability of our electric power infrastructure and the need for standby power. The

first commercial application for fuel cell technology was in standby electrical generators, led by small commercial generators, then large commercial installations and residential stationary standby systems followed. In standby power applications, fuel cells and our fuel system are economically favorable to battery-based systems. This is partly attributable to our simple fuel system being more affordable than other hydrogen storage technologies.

There are a number of reasons many fuel cell companies are targeting standby power applications. First, there exist a large number of standby power installations using lead-acid batteries that are expensive and must be replaced frequently. Secondly, these batteries have carved out a segment of the standby power market that value clean and quiet operation for indoor and residential applications. Thirdly, the relatively infrequent usage this market requires from the source of power means that fuel cells will deliver ten years of life and the cost of fuel is insignificant. To be successful in this market, a key commercial goal of fuel cell systems is to achieve a lower cost of ownership and deliver more runtime in the same footprint.

Stationary power generation has experienced rapid growth due to the demand for reliable power for critical use applications, primarily standby power for telecommunications systems, Internet data centers and health care facilities. For example, most telecom applications in which batteries are used typically are designed to deliver 4-8 hours of back-up time so that road crews can repair downed power lines before telephone power is lost. While each industry listed above has different back-up time requirements, the theme of reliable power is consistent. At today's prices, hydrogen fuel and fuel cells are capable of providing a more favorable economic and space utilization solution than incumbent lead-acid batteries.

We believe our *Hydrogen on Demand*™ system can deliver a safe, high-energy density and low-cost solution to fueling fuel cells for standby power applications. Our *Hydrogen on Demand*™ systems provide hydrogen for standby power without maintaining large amounts of hydrogen gas, which allows installation where fire codes prohibit compressed hydrogen cylinders. This could expand the market for fuel cell driven standby power systems. Packaged fuel can be distributed and delivered via common carriers for easy on-site installation. *Hydrogen on Demand*™ systems supply hydrogen for standby power at operating costs similar to industrial hydrogen in steel cylinders. System costs are lower than for electrolyzers and reformers. With *Hydrogen on Demand*™ systems, hydrogen is literally available "on demand".

Millennium Cell is currently working with fuel cell companies to develop commercial standby power fuel systems. This activity is expected to lead to initial commercial license and catalyst revenues in 2005. The driving force behind this development is the ability of the *Hydrogen on Demand*™ technology to provide a hydrogen fuel system that can be readily sited in both indoor and outdoor locations without restrictions imposed by fire codes on compressed hydrogen storage. As well, our fuel can be conveniently delivered to and refueled at all types of remote and easy-to-access installations throughout the existing telecommunications infrastructure.

Military Markets

We believe the need for advanced energy storage technologies is increasingly important in military applications. National security considerations include the need to relieve our nation's dependence on foreign oil, to provide plentiful, secure sources of power for our armed forces around the world and to provide energy for consumers during emergencies. Our military consumes a significant amount of the total petroleum used for American interests. This large and costly fuel consumption is the impetus behind efforts to find alternative fuels to power our ever-increasing defense presence around the world.

The military market is an early adopter of new technology. In 2002, we delivered two units to TACOM (U.S. Army Tank-Automotive and Armaments Command), and we anticipate a continuing relationship with them. We are part of three coalitions that are in consideration to receive appropriated funding in the 2004 federal budget: a fuel cell development project at an Air Force base, a fuel cell-powered military vehicle, and a fuel cell system to replace the highest volume battery used by all branches of the U.S. military. Further information on contracts and funding will be announced as funding agencies and our coalition partners permit us.

The potential advantages of Millennium Cell's technology for military applications include high volumetric and gravimetric storage density, ease of transport and refueling, modular conceptual design, high purity hydrogen stream, zero emissions at the point of use, quiet operation with a low thermal signature and minimal parasitic load, long term fuel storage, simple and robust design, and perhaps most compelling, the fact that our hydrogen fuel system reduces flammability and explosion risks, providing safety advantages in transport and in combat. For tactical and non-tactical ground transportation, for individual soldier power, for shipboard energy demands and in the air, *Hydrogen on Demand*™ has the potential to solve many of the energy challenges facing the military of the 21st century.

Transportation Markets

The transportation market has captured a large amount of public attention with nearly every major automaker involved in fuel cell vehicle research, development and demonstration. Government public statements have also focused on transportation, as evidenced by the U.S. Department of Energy's billion-dollar FreedomCAR and Hydrogen Fuel Initiatives. In 2003, we continued our relationship with DaimlerChrysler (which began in 2000) who formally agreed to fund the continued development of *Hydrogen on Demand*™ technology and identified a follow-on project in which we are now engaged. We have also continued our cooperative agreement with PSA Peugeot Citroën by agreeing to a second phase project to follow its hydrogen-powered vehicle, the H2O. Peugeot's use of the fuel cell and fuel system for range extension with a five-kilowatt fuel cell complements our work in the standby stationary and auxiliary power markets.

Our current fuel formulation uses sodium hydroxide as a stabilizer. This results in the discharged fuel having a pH above 12.5, which requires more specialized handling when transported in accordance with Environmental Protection Agency ("EPA") guidelines. In 2003, the EPA agreed to allow the discharged material to be shipped to U.S. Borax for processing. We are working to develop alternative means of stabilization so that the discharged fuel would have a pH below 12.5.

One particular area of focus in the transportation market will be maritime applications as the ports of the world seek to reduce emissions created both on water and on the docks. In 2003, we successfully demonstrated *Hydrogen on Demand*™ for the primary propulsion market applications. The Duffy Electric Boat water taxi launched in the fall in Newport Beach Harbor, CA, validates the clean emissions and quiet application of our fuel system used in conjunction with a fuel cell to replace a diesel generator for range extension of the electric boat.

Hydrogen-Fuel Infrastructure

We were recently awarded a $3.5 million dollar, three-year U.S. Department of Energy (DOE) grant to support advanced sodium borohydride regeneration research. Funding from this grant will be realized in the early part of 2004. In addition, we responded to the DOE Grand Challenge, a grant program aimed at defining and developing the best hydrogen storage technologies. If successful, our proposal would result in a $500,000 grant the first year. Notification of this award is expected in 2004.

Supply Chain

The economics of sodium borohydride are a critical factor in our progress. The goal of our research and development efforts in the area of sodium borohydride production is to lower raw costs by significantly reducing the amount of energy that is required in the current manufacturing process. Sodium borohydride is currently a specialty chemical that is produced by a few manufacturers located in the United States and Europe. To ensure the short-term and long-term supply of sodium borohydride for energy applications, we are collaborating with large, industrial partners including borate producers, industrial hydrogen providers, chemical providers, and major energy producers (including oil, gas, and electricity companies), as well as with the U.S. DOE. These collaborations will lead to an affordable, adequate supply of sodium borohydride to support commercialization of products that use our technology.

Our Strategy

Our goal is to convert our high volumetric energy dense, safe, and convenient hydrogen storage technology from the development and demonstration stage to commercialization. We believe that there is a growing need for a safe method of storing and releasing hydrogen across a variety of markets, a need for a higher energy output alternative fuel, and a growing recognition of the necessity of preserving the environment. We believe that the characteristics of our sodium borohydride technology will capitalize on all three. To achieve our goal, we have implemented the following strategy with the objective of earning revenue through license and royalty agreements:

- *Build Relationships with Government and Military Agencies*. We are pursuing sources of government funding, including grants, authorizations, appropriations and direct sales, and working to build constructive relationships across government agencies and legislative bodies. We believe that the increased visibility of hydrogen in the national energy policy will be advantageous as increased emphasis is placed on finding efficient and effective hydrogen storage and delivery mechanisms.
- *Develop Strategic Relationships with Key Consumer Electronics Manufacturers*. We believe such relationships facilitate the commercialization, distribution and consumer acceptance of our fuel technology into early fuel cell adopter markets for notebook personal computers ("PCs"), mobile phones, and personal digital assistants ("PDAs").
- *Build Relationships with Standby Power Generation OEMs and System Integrators*. Our technology is uniquely positioned to deliver a safe, clean hydrogen source for indoor and outdoor power generation applications. We believe that our *Hydrogen on Demand*™ system, when used in conjunction with a fuel cell in a standby power system, will provide an economically favorable solution to lead acid battery systems that are currently being used. We also believe our technology can deliver hydrogen fuel to generators with modified internal combustion engines that will significantly reduce emissions currently created by hydrocarbon fuels.
- *Pursue Ventures with Fuel Cell Companies*. We believe that our *Hydrogen on Demand*™ system will provide an optimal solution for existing fuel cell companies whose products and markets require the safe and efficient generation and storage of hydrogen. We will leverage these relationships to further our brand awareness and decrease the lead-time to end-product commercialization.
- *Build Relationships with the Transportation Community*. We are pursuing relationships with automotive and watercraft manufacturers and component system providers because we believe they will be the key to capitalizing on transportation opportunities in the future. As many of the top tier global automotive and maritime manufacturers and fleet vehicle operators continue to allocate resources to research the development of zero-emission fuel technologies, we believe our technology will be an attractive choice in the alternative fuel market.
- *Lower the Cost of Sodium Borohydride*. Sodium borohydride is currently a specialty chemical that is produced by a few manufacturers located in the United States and Europe. The current process has been used for more than 60 years with few significant process improvements in that time. We believe that we can compete in the consumer electronic and standby power markets at the current price of sodium borohydride, but it will be necessary to scale-up production while reducing the cost of the chemical to be competitive in transportation markets. We have been awarded patents for the primary production and regeneration of sodium borohydride and continue to actively research, develop, and file additional patent applications worldwide. We believe that this new chemistry will lower the cost of sodium borohydride by reducing or eliminating some of the costly raw materials that are required today to manufacture sodium borohydride.
- *Advance our Proprietary Technology*. We have a formidable intellectual property portfolio comprised of both awarded and pending patents for key components and systems that comprise *Hydrogen on Demand*™ technology. This includes all boron hydride-fueled hydrogen

generator system designs that utilize a supported catalyst, various catalyst compositions, and essential system design features that enable higher energy density, ease of use, system cost reduction and reliability. We also have patents awarded and pending for novel processes to manufacture sodium borohydride more energy efficiently and with more effective use of raw materials than current processes. In all of our technology development efforts, we have developed expertise and know-how beyond our patented inventions. We believe that this guarded intellectual property, including trade secrets, presents an effective barrier to entry for our technology. We will continue to advance these key aspects of our proprietary technology and apply it to our focused areas of commercialization effort – military, consumer electronics, standby power, and transportation.

- *Develop Market Awareness Generally*. We have relationships with state and federal governmental agencies for energy and environment policy and regulation and are also members and/or participants in several hydrogen, fuel cell, renewable energy, military, chemical, and electronic device industry trade associations and events. Through these continuing relationships, we believe that our technology will become more visible to a broader group of individuals and companies in our target markets.

Intellectual Property Rights

Our strategy is to secure protection of key intellectual property that we have developed in order to build a strong portfolio of marketable rights to manufacture and sell systems that use our inventions. In addition, we seek to use and assert such intellectual property to our competitive advantage. We rely on a combination of patents, trade secrets, trademarks, and license and nondisclosure agreements to protect our proprietary technology.

We use patents as the frontline means of protecting our technological advances and innovations, such as our proprietary hydrogen generators, components, materials, operating techniques and systems and, therefore, the enforcement of our patents is critical to our business. We have adopted a proactive approach to identifying patentable inventions and securing patent protection through the timely filing and aggressive prosecution of patent applications. Patent applications are filed in the United States and internationally, in countries carefully chosen based on the likely value and enforceability of intellectual property rights.

We own 24 U.S. and non-U.S. patents, which cover a wide variety of devices, systems, uses and applications for various boron chemistries. As of February 27, 2004, we have filed an additional 14 U.S. and 23 non-U.S. patent applications. We have also filed three U.S. trademark applications. Our earliest patent expires in 2015 and the most recently filed applications, if issued, will not expire until 2023.

Our intellectual property program includes a strong competitor-monitoring element. We actively monitor the patent position, technical developments and other activities of companies operating in all of the potential markets for our products. We expect activities relating to assertion and enforcement of our intellectual property rights to increase as the market develops.

Research

Our research team focuses on improving our sodium borohydride characteristics for use as a hydrogen source as well as in direct fuel cell technology by working to optimize cost performance of materials and processes. In order to most effectively achieve these plans, our facility in Eatontown, New Jersey houses sophisticated research and development equipment. This research complements development in our *Hydrogen on Demand*™ systems and components for specific market and customer applications or performance feature.

Competition

Consumer Electronics

The primary fuel cell technology competition for consumer electronic applications is the Direct Methanol Fuel Cell ("DMFC") system. This technology gained popularity when the hydrogen storage

choices were limited to compressed gas or metal hydrides. It became clear that a fuel with higher energy density would be required to meet the needs of consumer electronic devices. Without any concerted development of sodium borohydride-based systems, methanol became a popular choice because of its potential for high energy density. Now, several years later, DMFC systems have yet to be commercialized due to several significant disadvantages. Recently, Motorola, MTI and Casio have all announced publicly that they are no longer pursuing DMFC technology for consumer electronics applications due to this technology's inability to deliver the performance necessary to surpass Li Ion batteries. Hydrogen fuel cells and *Hydrogen on Demand*™ technology provide a solution to some of the problems of the DMFCs because they are smaller, more efficient, lower cost and safer.

Standby Power

There are several key specifications for standby power fuel systems that make our technology an attractive alternative to competing technologies. We believe the strengths of our technology align well with the needs of this market while our competition has critical gaps in fuel siting regulations, volumetric energy density, startup time, system cost, gravimetric energy density, and/or ease of refueling that may limit their opportunity to be successful in standby power applications**.** Our current weakness is that our fuel is not yet broadly distributed for this market. However, we have progressed in partnerships with our prospective licensees to develop a fuel delivery solution that leverages the ability for our fuel to be conveniently and safely transported to even the most remote installations. This effort should develop strength for our technology from a logistical perspective. Fuel cost is not a critical issue for standby power applications due to the low number of hours of annual usage.

The commercial standby power market is large and dominated by Valve-Regulated Lead Acid (VRLA) batteries for cable television, telecommunications and UPS applications. The key features of the system, including safety, energy density, quick start-up, and hydrogen purity, are attractive to standby fuel cell customers. For typical standby power requirements, *Hydrogen on Demand*™ systems have an advantage to compressed hydrogen in their system volume and weight with reduced risk of explosion or flammability. Lead acid batteries require close maintenance and regular replacement, are inclined to fail in extreme heat or cold, are difficult to monitor or predict failure, the cost, weight and volume increases proportionate to quantity (i.e., no economies of scale), and their disposal is regulated as hazardous material. For all these reasons, even at today's prices with limited availability, fuel cells can be an economical choice compared to VRLA batteries for many standby power needs.

Transportation

Our current transportation fuel system design compares favorably with our competitors' current and future technologies, including cryogenic liquid hydrogen storage, conventional and advanced compressed hydrogen gas storage, and conventional and advanced metal hydride storage systems.

Millennium Cell's future fuel system design will meet the DOE goals for hydrogen storage. We believe the advantages of hydrogen-fuel storage systems will become more apparent as automobile and maritime manufacturers account for consumer preference and vehicle profitability, and we believe that *Hydrogen on Demand*™ technology will become an attractive fuel system choice with our current partners, DaimlerChrysler, PSA Peugeot Citroën and Duffy Electric Boat, and perhaps other leading global companies.

Raw Materials

Sodium borohydride is manufactured from a natural mineral called borax. There are approximately 600 million metric tons of borax raw materials worldwide, and the United States is among the largest holders of borax reserves in the world. Borax is most commonly found in dried lake or sea beds, and it is mined at the surface using drag lines, whereby buckets are continuously dragged across the ground scraping borax from the surface. Currently, a few manufacturers make sodium borohydride as a specialty chemical. Despite the great quantities of reserves and current annual production of borax, there are few commercial applications that require sodium borohydride today. The most common application for sodium borohydride is for use as a bleaching agent in the paper industry. Up until now, the relatively limited commercial uses of sodium borohydride have allowed manufacturing to continue using technology from the early 1950s.

Human Resources

As of February 27, 2004, we had a total staff of 31 employees, of which 22 are scientists, engineers and other professionals. We have no plans to increase our staff in 2004.

Where You Can Find Other Information

Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports are available without charge on our website, www.millenniumcell.com, under the heading "Investor Relations" as soon as reasonably practicable after they are filed electronically with the SEC. The public may read and copy any materials filed by the Company with the SEC at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at http://www.sec.gov. The contents of these websites are not incorporated into this filing. Further, the Company's references to the URLs for these websites are intended to be inactive textual references only. We are providing the address to our Internet site solely for the information of investors. We do not intend the address to be an active link or to otherwise incorporate the contents of the website into this report.

Investment Considerations

We have decided to make disclosures of important qualitative risk factors that should be considered along with those described in our other filings with the Securities and Exchange Commission prior to making an investment in our common stock. Our business, the results of operations and the trading price of our common stock could be harmed by any of the following factors:

- We are a development stage company, which has only been in business for a short time. In addition, many aspects of our business plan rest on beliefs formed by our management and have not necessarily been supported by independent sources. As a result, your basis for evaluating us is limited.
- We have incurred substantial losses and expect losses for the foreseeable future. Accordingly, we may not be able to achieve profitability, and even if we do become profitable, we may not be able to sustain profitability.
- We expect our future operating results to vary significantly quarter to quarter, and increase the likelihood that we may fail to meet the expectations of securities analysts and investors at any given time.
- A substantial number of shares of common stock have been, and are expected in the near future to be, registered for resale in connection with the issuance of common stock to private investors and the issuance of our common stock after conversion of outstanding debentures and exercise of outstanding warrants. Resale of a significant number of shares into the public markets could depress the trading price of our common stock and make it more difficult for our stockholders to sell equity securities in the future.
- Our debentures are subject to a number of restrictive covenants, including a requirement that our common stock remain listed on a National Exchange. If we are unable to maintain a listing on either NASDAQ National Market or NASDAQ SmallCap Market, the debentures may be called by the holders. Furthermore, if the NASDAQ National Market or SmallCap listing is not maintained, shareholders might find it more difficult to liquidate their investment.
- We may be required to issue more shares of common stock to the holders of the debentures and the warrants as a result of the anti-dilution provisions of the debentures and the warrants. In addition, subject to the satisfaction of numerous conditions, we have the right to force conversion of the unsecured debentures at a discount to current market prices. Sales of

substantial amounts of common stock could reduce the market price for our common stock and make it more difficult for stockholders to sell their shares.

- Failure to comply with certain financial conditions under the terms of the unsecured convertible debenture could result in an event of default under the unsecured convertible debentures.
- We may need future capital to complete our product development and commercialization plans. If we are able to raise additional capital, it may dilute your ownership or restrict our ability to run our business.
- We may be subject to litigation if our common stock price is volatile, which may result in substantial costs and a diversion of our management's attention and resources and could have a negative effect on our business and results of operations.
- We may be unable to continue to complete prototype development and engineering of commercially viable hydrogen generation systems and, if not, may not be able to build our business as anticipated.
- Failure to meet milestones and performance goals with potential customers could delay or impede commercialization of our technology and potential purchasers of our systems may decline to purchase them or choose to purchase alternate technologies.
- Our hydrogen generation systems may only be commercially viable as a component of other companies' products and these companies may choose not to include our systems in their products.
- Any perceived problem while conducting demonstrations of our technology could hurt our reputation and the reputation of our products, which would impede the development of our business.
- Some of the raw materials that the hydrogen generation systems use are expensive and are not manufactured in large quantities and sell at high margin. Therefore, the energy produced by our systems may cost more than energy provided through conventional and alternative systems. Accordingly, our systems may be less attractive to potential users.
- If we cannot develop and demonstrate lower cost processes for the manufacture of sodium borohydride, our commercialization plans may be hindered.
- A mass market for fuel cells, hydrogen generation systems or batteries may never develop or may take longer to develop than we anticipate.
- We are heavily dependent on companies or governmental agencies that would include our hydrogen generation systems in their products and to develop the infrastructure required to use of our technologies in certain applications or markets.
- We are dependent on government contracts business which is important to the implementation of our commercialization plans.
- Failure to meet cost or performance goals with potential customers could delay or impede commercialization of our technology.
- Changes in environmental policies could result in automobile manufacturers abandoning their interest in fuel cell powered vehicles. This may substantially lessen the market for our products and harm the development of our business.
- Since zero emission vehicle requirements can be met without using fuel cells, automobile manufacturers may use other technologies to meet regulatory requirements.
- Any accidents involving our products or the raw materials used in our products could impair their market acceptance.
- We will continue to face intense competition from alternative power technologies and may be unable to compete successfully.

- We depend on our intellectual property and may not be able to protect the rights to that intellectual property. Our failure to protect this intellectual property could adversely affect our future growth and success.
- Our future plans could be adversely affected if we are unable to attract or retain key personnel.
- We do not intend to pay any dividends.

Item 2. Properties.

Our principal offices are located at 1 Industrial Way West, Eatontown, New Jersey 07724, currently occupying 32,500 square feet. Our amended lease will expire in 2008, with five and three year options to renew through 2016. We believe that the current facilities will be sufficient for our operations in the foreseeable future.

Item 3. Legal Proceedings.

From time to time, we may be involved in litigation relating to claims arising in the normal course of business. We do not believe that any such litigation would have a material adverse effect on our results of operations or financial condition.

Item 4. Submission of Matters to a Vote of Security Holders.

No matters were submitted to a vote of stockholders during the fourth quarter of the fiscal year covered by this report.

PART II

Item 5. Market For The Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities.

Market Price And Dividend Information

Price Range of Common Stock

Our common stock is traded on the NASDAQ National Market under the symbol "MCEL". The following table sets forth the high and low closing sale prices for our common stock as reported by NASDAQ.

	Common Stock Price	
Fiscal Year Ending December 31, 2003	**High**	**Low**
Fourth quarter	$3.40	$2.31
Third quarter	$3.95	$1.62
Second quarter	$2.08	$1.50
First quarter	$2.50	$1.53
Fiscal Year Ending December 31, 2002		
Fourth quarter	$2.83	$1.78
Third quarter	$3.01	$1.90
Second quarter	$4.25	$2.77
First quarter	$6.48	$3.45

As of March 1, 2004, there were approximately 282 holders of record of our common stock. The closing sale price of our common stock on March 1, 2004 was $2.36 per share.

Dividend Policy

We have never declared or paid any cash dividends on our common stock. We currently intend to retain our future earnings, if any, to finance the expansion of our business and do not expect to pay any dividends in the foreseeable future.

Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion.

Item 6. Selected Financial Data.

The following table presents selected historical financial data for the twelve months ended December 31, 2003, 2002, 2001, 2000 and 1999 (year of inception). Our selected financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the historical financial statements and related notes included elsewhere in this Form 10-K.

	Twelve Months Ended Dec. 31, 2003	Twelve Months Ended Dec. 31, 2002	Twelve Months Ended Dec. 31, 2001	Twelve Months Ended Dec. 31, 2000	Period From Jan. 1, 1999 (inception) to Dec. 31, 1999	Cumulative Amounts From Inception
Statement of Operations Data						
Revenue	$ 466,859	$ 719,392	$ —	$ —	$ —	$ 1,186,251
Cost of revenue	409,449	690,059	—	—	—	1,099,508
Gross margin	57,410	29,333	—	—	—	86,743
Product development and marketing	5,294,419	5,788,315	5,513,172	—	—	16,595,906
General and administrative	3,835,873	4,052,943	4,726,543	3,173,393	164,953	15,953,705
Restructuring expense	—	104,982	—	—	—	104,982
Non-cash charges	2,164,634	4,148,251	7,341,461	10,785,381	—	24,439,727
Depreciation and amortization	681,358	710,975	473,031	256,820	57,007	2,179,191
Research and development	1,020,102	1,515,376	2,624,823	2,131,684	820,128	8,112,113
Total operating expenses	12,996,386	16,320,842	20,679,030	16,347,278	1,042,088	67,385,624
Loss from operations	(12,938,976)	(16,291,509)	(20,679,030)	(16,347,278)	(1,042,088)	(67,298,881)
Interest income (expense), net	(2,897,077)	300,299	1,226,701	678,194	10,811	(681,072)
Equity in losses of affiliate	(488,364)	(367,714)	—	—	—	(856,078)
Loss before income taxes	(16,324,417)	(16,358,924)	(19,452,329)	(15,669,084)	(1,031,277)	(68,836,031)
Benefit from income taxes	221,480	234,963	—	—	—	456,443
Net loss	(16,102,937)	(16,123,961)	(19,452,329)	(15,669,084)	(1,031,277)	(68,379,588)
Preferred stock amortization	—	—	—	2,150,881	—	2,150,881
Net loss applicable to common stockholders	$(16,102,937)	$(16,123,961)	$(19,452,329)	$(17,819,965)	$(1,031,277)	$(70,530,469)
Loss per share — basic and diluted	$ (.51)	$ (.58)	$ (.71)	$ (.69)	$ (.04)	$ (2.61)

	December 31, 2003	December 31, 2002
Balance Sheet Data		
Total assets	$10,984,672	$14,165,811
Secured debentures	$ 2,399,988	$ 2,399,988
Refundable grant obligation	$ 187,266	$ 227,522
Capital lease obligation	$ 31,909	$ —

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion should be read in conjunction with our financial statements and the notes thereto appearing elsewhere in this Form 10-K.

General

We were formed as a Delaware limited liability company on December 17, 1998, and organized and began operations on January 1, 1999 (inception date). We were converted into a Delaware corporation on April 25, 2000 when all of the outstanding equity interests of the limited liability company were converted into shares of common stock of the corporation. Unless otherwise indicated, all information that we present in this Form 10-K for any date or period gives effect to the conversion as if it had occurred on that date or as of the beginning of that period and all references to common stock for periods before the conversion mean our issued and outstanding membership interests.

Overview

We have developed and patented a process called Hydrogen on Demand that safely generates pure hydrogen or electricity from environmentally friendly raw materials. In the process, the energy potential of hydrogen is carried in the chemical bonds of sodium borohydride, which in the presence of a catalyst releases hydrogen or produces electricity. The primary input components of the reaction are water and sodium borohydride, a derivative of borax, which is found in substantial natural reserves globally. Hydrogen from this system can be used to power fuel cells, as well as fed directly to internal combustion engines. We also have patents covering boron-based longer-life batteries. Our goal is to convert our technology from the research and development stage to commercialization.

Our losses have resulted primarily from costs associated with product development and research and development activities as well as non-cash amortization of preferred stock and non-cash charges related to the issuance of stock options and warrants to employees and third parties. As a result of planned expenditures in the areas of research, product development and marketing and additional non-cash charges relating to employee stock options, we expect to incur additional operating losses for the foreseeable future.

Results of Operations

Year Ended December 31, 2003 versus 2002

Revenues. We recorded $466,859 of revenues during the year ended December 31, 2003 compared with revenues of $719,392 in 2002. The decline in revenue was attributable to fewer sales of large prototype systems and services to the transportation markets and more sales of smaller systems designed for standby power and consumer electronics markets.

In the near-term, revenues are expected to be derived substantially from up-front license fees, research contracts with various federal, state and local agencies, collaborations with other companies, management services, and royalty payments or joint venture revenue from licensees or strategic partnerships. Revenues will be recognized in the period in which technology is delivered, licensing revenues are earned, or as services are performed.

Cost of Revenues. We recorded cost of revenues of $409,449 during the year ended December 31, 2003, down from $690,059 for the year ended December 31, 2002. The decline in cost of revenue was attributable to fewer sales of large prototype systems and services to the transportation markets and more sales of smaller systems designed for standby power and consumer electronics markets. Cost of revenues on prototype unit sales during the development stage are allocated from the Product Development and Marketing expense and Research and Development expense line items on the income statement depending on the nature of the project.

Product Development and Marketing Expense. Product development and marketing expenses for the year ended December 31, 2003 were $5,294,419 compared to $5,788,315 for the year ended December 31, 2002, a decrease of $493,896. This decrease is mostly attributable to cost reduction efforts implemented throughout fiscal 2003.

General and Administrative Expense. General and administrative expenses were $3,835,873 for the year ended December 31, 2003 compared to $4,052,943 for the year ended December 31, 2002, a decrease of $217,070. The decrease was a result of increased efficiency of our administrative and finance organizations as well as the impact of headcount reductions and other cost reduction activities.

Restructuring Expense. There was no restructuring expense in 2003. Restructuring expense was $104,982 for the year ended December 31, 2002. During the second quarter of 2002, the Company incurred and paid restructuring expenses primarily for severance costs related to 14 employee separations.

Non-cash Charges. Non-cash charges were $2,164,634 for the year ended December 31, 2003 as compared to $4,148,251 compared for the year ended December 31, 2002, a decrease of $1,983,617. The decrease was mostly attributable to the completion of vesting in 2003 of below market value options issued to employees during 2000.

Depreciation and Amortization. Depreciation and amortization was $681,358 for the year ended December 31, 2003 compared to $710,975 for the year ended December 31, 2002, a decrease of $29,617. This was attributable to more assets being fully depreciated than were added during the year.

Research and Development Expense. Research and development expenses were $1,020,102 for the year ended December 31, 2003 compared to $1,515,376 for the year ended December 31, 2002, a decrease of $495,274. The decrease is primarily attributable to the full year impact of the restructuring announced in May 2002 as well as other cost reduction programs implemented in 2003.

Interest Income (Expense), net. Net interest expense was $2,897,077 for the year ended December 31, 2003 compared to interest income of $300,299 for the year ended December 31, 2002, a change of $3,197,376. The increase in interest expense was attributable to the issuance and subsequent conversion of the debentures issued in December 2002 and January 2003 through a private placement financing. As the unsecured debentures were converted into common shares, the pro rata portion of the discount and charges related to the beneficial conversion features was recorded as interest expense. As of December 31, 2003, approximately $11.3 million of the debentures issued in the private placement financing had been converted to common stock.

The components of interest expense were as follows for the year ended December 31, 2003 (in millions):

Beneficial conversion feature	$1.4
Amortization of debt discount	0.9
Amortization of debt issue costs	0.6
Total Interest Expense	$2.9

Equity in Losses of Affiliate. In July 2002, the Company agreed to acquire a 50% non-controlling interest in a European alkaline fuel cell company (the "Affiliate"). During the period from July 2002 to June 2003, the Company directly and indirectly provided limited funding for their proportionate share of the Affiliate's operating expenses. As of June 30, 2003, the Company had written off its Investment in Affiliate on the balance sheet and determined the fair value of the investment was zero. During the third quarter of 2003, the Company decided to abandon its interest in the Affiliate and no gain or loss was recognized upon this event.

Benefit from Income Taxes. Benefit from income taxes was $221,480 for the year ended December 31, 2003 as compared to $234,963 in 2002. This income was derived from the Company's participation in the New Jersey Emerging Technology and Biotechnology Financial Assistance Program. This program allows certain companies to transfer New Jersey net operating losses to other companies. This program, if continued by the state in future years, may produce similar cash inflows for the Company each year.

Year Ended December 31, 2002 versus 2001

Revenues. We recorded $719,392 of revenues during the year ended December 31, 2002. The revenues were attributable to sales of prototype *Hydrogen on Demand* systems and design and engineering services. There were no revenues in 2001.

In the near-term, revenues are expected to be derived substantially from up-front license fees, research contracts with various federal, state and local agencies, collaborations with other companies, management services, and royalty payments or joint venture revenue from licensees or strategic partnerships. Revenues will be recognized in the period in which technology is delivered, licensing revenues are earned, or as services are performed.

Cost of Revenues. We recorded cost of revenues of $690,059 during the year ended December 31, 2002. Cost of revenues on prototype unit sales during the development stage are allocated from the Product Development and Marketing expense and Research and Development expense line items on the income statement depending on the nature of the project. There was no cost of revenues in the year ended December 31, 2001.

Product Development and Marketing Expense. Product development and marketing expenses for the year ended December 31, 2002 were $5,788,315 compared to $5,513,172 for the year ended December 31, 2001, an increase of $275,143. This increase is mostly attributable to increased business development resources dedicated to penetrating markets in the portable power and military applications in addition to spending on programs that support our technology's continued evolution from research to commercialization.

General and Administrative Expense. General and administrative expenses were $4,052,943 for the year ended December 31, 2002 compared to $4,726,543 for the year ended December 31, 2001, a decrease of $673,600. The decrease was a result of increased efficiency of our administrative and finance organizations as well as the impact of headcount reductions in those organizations during the second quarter of 2002.

Restructuring Expense. Restructuring expense was $104,982 for the year ended December 31, 2002. During the second quarter of 2002, the Company incurred and paid restructuring expenses primarily for severance costs related to 14 employee separations. There was no restructuring expense in 2001.

Non-cash Charges. Non-cash charges were $4,148,251 for the year ended December 31, 2002 compared to $7,341,461 for the year ended December 31, 2001, a decrease of $3,193,210. The decrease was mostly attributable to the substantial completion of vesting in 2001 of warrants issued to affiliates during 2000 and the forfeiture of certain unvested employee options during the fourth quarter of 2001. Included in the charges was an accrual for approximately $225,000 for Board of Directors' compensation for meetings held in 2002 that will be paid to the directors in shares of the Company's common stock in 2003.

Depreciation and Amortization. Depreciation and amortization was $710,975 for the year ended December 31, 2002 compared to $473,031 for the year ended December 31, 2001, an increase of $237,944. This increase reflects depreciation on our newly completed lab and facilities expansion program in 2002.

Research and Development Expense. Research and development expenses were $1,515,376 for the year ended December 31, 2002 compared to $2,624,823 for the year ended December 31, 2001, a decrease of $1,109,447. The decrease is primarily attributable to the cost reduction efforts announced in May 2002.

Interest Income, net. Net interest income was $300,299 for the year ended December 31, 2002 compared to $1,226,701 for the year ended December 31, 2001, a decrease of $926,402. The decrease in net interest income was the result of declining average cash balances and interest rate decreases from 2001 to 2002 in addition to interest expense and amortization of discount incurred on the $3.5 million unsecured debentures issued in December 2002. The total interest expense incurred for the year ended December 31, 2002 for the $3.5 million unsecured debentures was $39,176.

Equity in Losses of Affiliate. In July 2002, the Company agreed to acquire a 50% interest in a European alkaline fuel cell company (the "Affiliate"). The Company's investment is accounted for by the equity method. According to the purchase agreement, the Company was responsible to record its portion of the Affiliate's losses from July 1, 2002 through December 31, 2002. The losses recorded by the Company during this period were $367,714.

Benefit from Income Taxes. Benefit from income taxes was $234,963 for the year ended December 31, 2002. This income was derived from the Company's participation in the New Jersey Emerging Technology and Biotechnology Financial Assistance Program. This program allows certain companies to transfer New Jersey net operating losses to other companies. This program, if continued by the state in future years, may produce similar cash inflows for the Company each year.

Liquidity and Capital Resources

General

Since the inception date, we have financed our operations primarily through our initial public offering in August 2000 and private placements of equity and debt securities. In 1999, we issued

$1,250,000 of membership interests in Millennium Cell LLC for cash, which subsequently were converted into our common stock as of April 25, 2000. We also received a capital contribution of $500,000 in the first quarter of 2000, and in May 2000, we sold 759,368 shares of Series A preferred stock, which automatically converted into 759,368 shares of common stock upon the completion of our initial public offering. The net proceeds from our initial public offering totaled approximately $29.9 million and net proceeds from private placement transactions in 2002 and 2003 totaling $14.1 million. In February 2004, the Company received net proceeds of approximately $5.6 million from a new private placement transaction.

Ballard Power Systems

In October 2000, we received $2.4 million in cash from Ballard Power Systems Inc. as an advance for prospective royalties pursuant to a product development agreement between Ballard and us. In addition, we granted to Ballard a warrant to purchase up to 400,000 shares of our common stock, which was terminated as part of the strategic investment discussed below. Upon completion of certain stages of product development, the parties agreed to negotiate in good faith for the grant of a license of our technology to Ballard in certain fields of use, at which time prepaid royalties may be earned and the warrants will be issued and recorded at fair value.

On November 8, 2002, we agreed with Ballard that the product development milestones have been achieved and agreed to convert the $2.4 million refundable royalty payment into an investment in our company in the form of secured convertible debentures due November 8, 2005. The Ballard debentures are secured by a standby letter of credit issued by Wachovia Bank, National Association, with an aggregate face amount equal to the outstanding principal. We pledged to the bank as collateral $2.4 million of funds previously reported under cash and cash equivalents on the accompanying balance sheet. We will not have the ability to use this cash until the bank pledges are released upon conversion of the Ballard debentures to common stock. The debentures are convertible at a conversion price of $4.25, subject to anti-dilution adjustments and certain price protection in the event the Company initiates the conversion. As part of the purchase agreement entered into between Ballard and us, Ballard retains the option to license the non-exclusive right to manufacture and sell products with our Hydrogen on Demand technology for specific portable fuel cell products and stationary internal combustion engine generators.

Private Placement Transactions

On June 19, 2002, the Company entered into a private placement financing transaction with two institutional and accredited investors pursuant to the terms of a securities purchase agreement among the Company and the purchasers. The private placement was exempt from registration under the Securities Act of 1933, as amended, pursuant to Section 4(2) of such Act. The placement consisted of the sale of 1,075,269 shares of common stock for gross proceeds of $3.0 million and warrants to purchase 268,817 shares of common stock (with an exercise price of $3.93 per share).

On October 31, 2002, the Company entered into a separate private placement financing transaction with the same two institutional and accredited investors pursuant to the terms of a new purchase agreement among the Company and the purchasers. The private placement was exempt from registration under the Securities Act of 1933, as amended, pursuant to Section 4(2) of such Act. The placement consisted of the sale of 588,790 shares of common stock and warrants (with an exercise price of $2.32) to purchase 147,198 shares of common stock of the Company for gross proceeds of $1.0 million. Pursuant to the terms of the purchase agreement, one of the investors agreed to acquire $12 million of secured and unsecured debentures, convertible into common stock of the Company, subject to certain terms and conditions, and warrants.

In December 2002, the Company issued convertible unsecured debentures with a principal amount of $3.5 million. As of June 30, 2003, the entire $3.5 million of unsecured debentures had been converted into 2,094,048 shares of common stock.

On January 23, 2003, the Company's shareholders approved the issuance of $8.5 million of secured convertible debentures and warrants to acquire 589,376 shares. The secured debentures were

issued on January 30, 2003. During the third quarter of 2003, the Company exchanged all outstanding secured convertible debentures for unsecured convertible debentures and registered the common shares underlying all of the unsecured convertible debentures. As a result, the letter of credit securing the secured convertible debentures was released. During the third and fourth quarters of 2003, the Company converted approximately $7.8 million of the unsecured convertible debentures into 3,373,953 shares of common stock. As a result, approximately $0.7 million of unsecured convertible debentures were outstanding as of December 31, 2003. These debentures were converted to common shares in January 2004.

In accordance with APB No. 14, "Accounting for Convertible Debt and Debt Issued with Stock Purchase Warrants", the Company determined that the fair value of the debentures issued in December 2002 and in January 2003 (the "Convertible Debentures") were $11,036,195 upon issuance. The resulting discount is being amortized as interest expense, using the effective interest method, over the original maturity period of the debentures or ratably as they are converted, whichever comes first. During the year ended December 31, 2003, the Company recognized a non-cash charge to interest expense of $926,832 for discount amortization on debentures.

In accordance with Emerging Issues Task Force ("EITF") No. 00-27, "Application of Issue No. 98-5 to Certain Convertible Instruments", and EITF No. 98-5, "Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios", and after considering the terms of the Convertible Debentures, the Company determined that the debentures contained a beneficial conversion feature ("BCF"). The BCF existed because of a discount that was given to the investor for the company-initiated conversion of the debentures. These discounts ranged from 4% to 12%, depending on the amount of debentures converted into common stock. Accordingly, at the time of conversion, the Company recorded as interest expense the applicable BCF based on the fair value of the conversion feature on that date. During the year ended December 31, 2003, approximately $11.3 million of debentures were converted at the option of the Company and BCF charges of $1,356,825 were recorded.

In January 2004, the Company entered into a private placement financing transaction with an institutional and accredited investor pursuant to the terms of a securities purchase agreement between the Company and the purchaser. The private placement was exempt from registration under the Securities Act of 1933, as amended, pursuant to Section 4(2) of such Act. Pursuant to the terms of the agreement, the investor was obligated, subject to satisfaction of certain conditions that were outside of its control, to purchase $6 million of unsecured debentures and, at the Company's sole option, up to an additional $4 million of unsecured convertible debentures.

The registration of shares underlying the $6.0 million of unsecured debentures was declared effective by the SEC on February 17, 2004 and the debenture was issued to the investor on that date at an initial conversion price of $3.30, subject to certain terms and conditions. The additional $4 million of unsecured convertible debentures will be issued to the investor at the sole option of the Company, provided that at least $4 million of the $6 million debenture has been converted into common stock in accordance with the terms of such debenture, and the Company is in compliance in all material respects with the private placement documents. Under the terms of the agreement, cash fees of $400,000 were deducted from the initial proceeds and 140,180 shares of common stock were issued to the holder of the debentures upon closing of the transaction. The market value of these shares and the cash fees will be recorded as a discount on the debentures and amortized over the term of the debentures or as they are converted, whichever happens first. The debentures will mature in 18 months and are subject to six, 30-day extensions and bear interest at 6% with payments due quarterly.

Sources and Uses of Cash

As of December 31, 2003, we had $6,004,173 in cash and cash equivalents and restricted cash of $2,998,379. Cash used in operations totaled $9,856,825, $11,388,768 and $11,139,147 in 2003, 2002 and 2001, respectively, and related to funding our net operating losses. The restricted cash comprised $2.4 million of cash used for collateral in connection with Ballard's strategic investment in the Company and $0.6 million of cash used for collateral as security deposit held by our landlord in connection with

the Company's amended lease agreement. These funds used will not be available for use in operations until the letters of credit have been reduced or terminated.

Investing activities provided/(used) cash of $(441,281), $7,037,933 and $(12,751,441) in 2003, 2002 and 2001, respectively. Investing activities in 2003 consisted primarily of an investment in and affiliate (as described below under "Investment in Affiliate") and patent registration costs. In 2002 and 2001, investment activities consisted mainly of maturities of investments in high-grade government bonds and bank certificates of deposit and purchases of laboratory equipment necessary for the continuation of our research and development activities. We will continue to register, pursue and defend patents on our technology.

Investment in Affiliate

In July 2002, the Company agreed to acquire a 50% non-controlling interest in a European alkaline fuel cell company (the "Affiliate"). During the period from July 2002 to June 2003, the Company directly and indirectly provided limited funding for their proportionate share of the Affiliate's operating expenses. In the ordinary course of business, the Company had related party transactions directly and indirectly with a member of the Company's Board of Directors who provided professional services for the Affiliate in 2002 and 2003. Such payments amounted to $45,000 during the year ended December 31, 2003.

As of June 30, 2003, the Company had written off its Investment in Affiliate on the balance sheet and determined the fair value of the investment was zero. During the third quarter of 2003, the Company decided to abandon its interest in the Affiliate and no gain or loss was recognized upon this event.

Commitments and Contingencies

In April 2001, the Company amended its main operating lease to provide for additional space for the Company's principal operating offices and laboratories. As of November 2001, we occupy all facilities contemplated in the lease agreement. The amended lease will expire in 2008 and will contain options to renew for an additional 8 years and will require the Company to pay its allocated share of taxes and operating cost in addition to the annual base rent payment. Future minimum annual lease commitments including estimated allocated taxes and maintenance under the amended operating leases are as follows:

2004	484,310
2005	484,310
2006	484,310
2007	484,310
2008	443,950
Total	$2,381,190

Rent expense under the operating lease was approximately $546,710, $507,310 and $288,498 for the years ended December 31, 2003, 2002, and 2001, respectively.

In connection with the amended lease agreement, the Company issued a letter of credit to the landlord for $588,972 in lieu of a cash security deposit. The letter of credit was collateralized with a portion of the Company's cash and is classified as Restricted Cash. The funds used for collateral will not be available for use in operations.

Between January 1999 and April 2000, we received an aggregate of $227,522 from a recoverable grant award from the State of New Jersey Commission on Science and Technology. The funds were used to partially fund costs directly related to development of our technology. The recoverable grant is required to be repaid when we generate net sales in a fiscal year. The repayment obligation, which began in June 2001, ranges from 1% to 5% of net sales over a ten-year period. We are obligated to repay the unpaid amount of the original grant at the end of the ten-year period. We repaid approximately $21,000 of the award during the second quarter of 2003, which represents 3% of the 2002 net sales. Based upon 4% of the 2003 net sales, $18,675 is due to be repaid in 2004.

The Company received net proceeds from the sale of New Jersey net operating losses (NOL's) in conjunction with the New Jersey Emerging Technology and Biotechnology Financial Assistance Program of $221,480 and $234,963 in 2003 and 2002, respectively. This program allows certain companies to apply to transfer New Jersey NOL's to other companies. This program, if continued by the state in future years, may produce similar cash inflows for the Company.

We believe that our current cash and cash equivalents, together with the approximate $5.6 million cash available from the recent private placement financing, together with future expected conversions of unsecured debentures, and projected cash generated from our operations will be sufficient to satisfy anticipated cash needs of our operations through at least the 2005 fiscal year. We may raise additional funds through public or private financing, collaborative relationships or other arrangements. We cannot be assured that additional funding, if sought, will be available or will be on terms favorable to us. Further, any additional equity financing may be dilutive to stockholders, and debt financing, if available, may involve restrictive covenants. Our failure to raise capital when needed may harm our business and operating results.

Critical Accounting Policies

Application of Critical Accounting Policies

The discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect our reported assets and liabilities, revenues and expenses, and other financial information. Actual results may differ significantly from these estimates under different assumptions and conditions. In addition, our reported financial condition and results of operations could vary due to a change in the application of a particular accounting standard.

We regard an accounting estimate underlying our financial statements as a "critical accounting estimate" if the accounting estimate requires us to make assumptions about matters that are highly uncertain at the time of estimation and if different estimates that reasonably could have been used in the current period, or changes in the estimate that are reasonably likely to occur from period to period, would have had a material effect on the presentation of financial condition, changes in financial condition, or results of operations.

Our significant accounting policies are more fully described in Note 2 to our consolidated financial statements. Not all of these significant accounting policies, however, require management to make difficult, complex or subjective judgments or estimates. Our management has discussed our accounting policies with the audit committee of our board of directors, and we believe that our estimates relating to revenue recognition, convertible debt and stock options described below fit the definition of "critical accounting estimates."

Revenue Recognition

The Company's near term revenues will be derived substantially from contracts that require the Company to deliver hydrogen generation technology, management services, system design and prototype systems and licensing of technology for test and evaluation. It is anticipated that revenues will be recognized in the period in which the technology is delivered or licensed revenue is earned.

Convertible Debt

The Company accounts for the issuance and conversion of convertible debt in accordance with APB No. 14, "Accounting for Convertible Debt and Debt Issued with Stock Purchase Warrants". As a result, the Company has and will record original issue discounts to the extent the fair value of the debt is below the face value of the instrument and amortize the discount over the life of the instrument. To the extent conversions of debt into common stock are made prior to the maturity date of the instrument, the Company will record as interest expense a ratable proportion of the discount associated with the face value of the debt converted.

The Company accounts for issuances of convertible debt in accordance with Emerging Issues Task Force ("EITF") No. 00-27, "Application of Issue No. 98-5 to Certain Convertible Instruments" ("EITF No. 00-27"), and EITF No. 98-5, "Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios" ("EITF No. 98-5"). As a result of certain conversion price discounts included within the Company's outstanding debt instruments, the Company will record interest expense resulting from Beneficial Conversion Features as described under the caption "Liquidity and Capital Resources" above.

Stock Options

The Company has recorded non-cash charges in 2003, 2002 and 2001 to the fair value of warrants issued to certain third parties. Certain parties have the ability to earn new awards based on defined milestones and service periods. The accounting methodology requires a re-valuing of the related earned warrants at each reporting period using a Black-Scholes pricing model. Due to this variable accounting methodology, it is difficult to predict the amount of additional non-cash charges the company will incur related to these warrants.

The Company also records non-cash charges for the difference between the grant price and market price on the date of grant related to certain stock options issued to employees and elected directors below market prices as defined by APB No. 25. The non-cash charge is recognized ratably over the related vesting period of the respective option contracts. As of June 30, 2003, all of these options were vested.

The Company also discloses pro forma information regarding net income and earnings per share that is required by SFAS No. 148. This information is required to be determined as if the Company had accounted for its employee stock options under the fair value method of that statement. The fair value of options granted for the fiscal years ended December 31, 2003, 2002 and 2001 has been estimated at the date of grant using a Black-Scholes option-pricing model.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. The Company's options have characteristics significantly different from those of traded options, and changes in the subjective input assumptions can materially affect the fair value estimate. Due to these highly subjective assumptions, the non-cash charges incurred in 2003, 2002 and 2001 for warrants issued to third parties and the pro forma disclosures of net loss and loss per share for fiscal 2003, 2002 and 2001, are not likely to be representative of non-cash charges and the pro forma effects on net loss and loss per share, respectively, in future years.

Impact of Recently Issued Accounting Standards

In January 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities" (FIN 46). FIN 46 addresses consolidation by business enterprises of variable interest entities with certain defined characteristics. This interpretation applies immediately to variable interest entities created after January 31, 2003, and to variable interest entities in which an enterprise obtains an interest after that date. It applies in the first fiscal year or interim period beginning after December 15, 2003, to variable interest entities in which an enterprise holds a variable interest that it acquired before February 1, 2003. The Company determined it had no variable interest entities and this interpretation did not have any impact on the accompanying financial statements.

In May 2003, the FASB issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity." This Statement establishes standards for how an issuer classifies and measures certain financial instruments with characteristics of both liabilities and equity. It requires that an issuer classify a financial instrument that is within its scope as a liability or an asset in some circumstances. This Statement is effective for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the beginning of the first interim period beginning after June 15, 2003. This Statement did not have a material impact on the Company's financial statements.

Item 7a. Quantitative and Qualitative Disclosure of Market Risk.

Market risk represents the risk of loss that may impact our financial position, operating results or cash flows due to changes in U.S. interest rates. This exposure is directly related to our normal operating activities. Our cash and cash equivalents are invested with high quality issuers and are generally of a short-term nature. As a result, we do not believe that near-term changes in interest rates will have a material effect on our future results of operations.

Our systems' ability to produce energy depends on the availability of sodium borohydride, which has a limited commercial use and is not manufactured in vast quantities. There are currently only two major manufacturers of sodium borohydride and there can be no assurance that the high cost of this specialty chemical will be reduced. Once we commence full operations in the future, we may need to enter into long-term supply contracts to protect against price increases of sodium borohydride. There can be no assurance that we will be able to enter into these agreements to protect against price increases.

Item 8. Financial Statements and Supplementary Data.

See Index to Financial Statements and Financial Statement Schedule in Item 15.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9a. Controls and Procedures.

(a) Evaluation of Disclosure Controls and Procedures.

The Company's Chief Executive Officer and Acting Chief Financial Officer has evaluated the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13a-14(c) and 15d-14(c) under the Securities Exchange Act of 1934, as amended) as of a date within 90 days prior to the filing date of this annual report. Based on such evaluation, he has concluded that, as of the evaluation date, the Company's disclosure controls and procedures are effective in alerting him on a timely basis to material information relating to the Company required to be included in the Company's reports filed or submitted under the Exchange Act.

(b) Changes in Internal Controls.

Since the evaluation date, there have not been any significant changes in the Company's internal controls or in other factors that could significantly affect such controls.

PART III

Item 10. Directors and Executive Officers of the Registrant.

Information regarding Section 16(a) compliance, the Audit Committee, the Company's Code of Conduct and background of the directors appearing under the captions "Election of Directors," "Common Stock Ownership of Principal Stockholders and Management" and "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company Proxy Statement for the 2004 annual meeting is hereby incorporated by reference.

Item 11. Executive Compensation.

Information regarding executive compensation appearing under the caption "Executive Compensation" in the Company's Proxy Statement for the 2004 annual meeting is hereby incorporated by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Equity Compensation Plan Information

As of December 31, 2003	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Plan Category	(a)	(b)	(c)
Equity compensation plan approved by security holders[1]	4,619,631	$3.67	3,880,369
Equity compensation plans not approved by security holders	—	—	—
Total	4,619,631	$3.67	3,880,369

[1] This plan is our Amended and Restated 2000 Stock Option Plan and includes restricted stock awards issued as part of the Tender Exchange Offer to employees in August 2003.

Other information setting forth the security ownership of certain beneficial owners and management appearing under the caption "Common Stock Ownership of Principal Stockholders and Management" in the 2004 Proxy Statement is hereby incorporated by reference.

Item 13. Certain Relationships and Related Transactions.

None.

Item 14. Principal Accountant Fees & Services.

Information appearing under the captions "Fees Paid to the Company's Auditors" in the 2004 Proxy Statement is hereby incorporated by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules, and Reports on Form 8-K.

(a) Documents filed as part of this report

1. Financial Statements

The financial statements and notes are listed in the Index to Financial Statements on page F-1 of this report.

2. Financial Statement Schedules

None of the schedules for which provision is made in the applicable accounting regulations under the Securities Exchange Act of 1934, as amended, are required.

3. Exhibits

The following documents are filed as Exhibits to this report on Form 10-K or incorporated by reference herein. Any document incorporated by reference is identified by a parenthetical referencing the SEC filing which included such document.

Exhibit No.	Description
2.1†	— Certificate of Conversion of Millennium Cell LLC to Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
3.1†	— Certificate of Incorporation of Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
3.2†	— By-Laws of Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
3.3†	— Certificate of Amendment to Certificate of Incorporation of Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
3.4†	— Certificate Eliminating Reference to the Series A Convertible Preferred Stock from the Certificate of Incorporation of Millennium Cell Inc. (incorporated by reference to Exhibit 3.4 to the Quarterly Report on Form 10-Q filed on May 13, 2002)
3.5†	— Certificate of Amendment of Certificate of Incorporation of Millennium Cell Inc. (incorporated by reference to Exhibit 3.5 to the Quarterly Report on Form 10-Q filed on May 13, 2002)
4.2†	— Specimen stock certificate representing the Registrant's Common Stock (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
4.5†	— First Warrant to Purchase 224,014 shares of Common stock dated June 19, 2002 (incorporated by reference to Exhibit 4.5 to the Current Report on Form 8-K filed on June 26, 2002)
4.6†	— First Warrant to Purchase 44,803 shares of Common Stock dated June 19, 2002 (incorporated by reference to Exhibit 4.6 to the Current Report on Form 8-K filed on June 26, 2002)
4.7.1†	— Closing Warrant No. 1 to purchase 73,599 shares of Common Stock dated October 31, 2002 (incorporated by reference to Exhibit 4.7.1 to the Annual Report on Form 10-K filed on March 17, 2003)

Exhibit No.	Description
4.7.2†	— Closing Warrant No. 2 to purchase 73,599 shares of Common Stock dated October 31, 2002 (incorporated by reference to Exhibit 4.7.2 to the Annual Report on Form 10-K filed on March 17, 2003)
4.8†	— First Warrant to purchase 242,678 shares of Common Stock dated December 26, 2002 (incorporated by reference to Exhibit 4.8 to the Annual Report on Form 10-K filed on March 17, 2003)
4.9†	— Second Warrant to purchase 589,376 shares of Common Stock dated January 30, 2003 (incorporated by reference to Exhibit 4.9 to the Annual Report on Form 10-K filed on March 17, 2003)
4.10.1†	— Unsecured Convertible Debenture No. 1 dated December 26, 2002 (incorporated by reference to Exhibit 4.10.1 to the Annual Report on Form 10-K filed on March 17, 2003)
4.10.2†	— Unsecured Convertible Debenture No. 2 dated December 26, 2002 (incorporate by reference to Exhibit 4.10.2 to the Annual Report on Form 10-K filed on March 17, 2003)
4.11†	— Secured Convertible Debenture in aggregate principal amount of $8.5 million dated January 30, 2003 (incorporated by reference to Exhibit 4.12 to the Annual Report on Form 10-K filed on March 17, 2003)
4.12†	— Secured Convertible Debenture issued to Ballard Power Systems, Inc. (incorporated by reference to Exhibit 4.13 to the Quarterly Report on Form 10-Q filed on November 14, 2002)
4.13†	— Letter Amendment to Unsecured Convertible Debenture and Secured Convertible Debenture dated April 22, 2003 (incorporated by reference to Exhibit No. 4.10.3 to Registration Statement No. 333-105582 on Form S-3 filed on May 27, 2003)
4.14†	— Exchange Convertible Debenture No. ED-1 in aggregate principal amount of $3 million (incorporated by reference to Exhibit 4.13 to Registration Statement No. 333-108768 on Form S-3 filed on September 12, 2003)
4.15†	— Secured Convertible Debenture No. SD-2 in aggregate principal amount of $5.5 million (incorporated by reference to Exhibit 4.14 to Registration Statement No. 333-108768 on Form S-3 filed on September 12, 2003)
4.16†	— Letter Amendment to Exchange Convertible Debenture and Secured Convertible Debenture dated September 11, 2003 (incorporated by reference to Exhibit 4.15 to Registration Statement No. 333-108768 on Form S-3 filed on September 12, 2003)
4.17†	— Form of Unsecured Convertible Debenture (incorporated by reference to Exhibit 4.16 to Registration Statement no. 333-112519 on Form S-3 filed on February 5, 2004)
4.18*	— Unsecured Convertible Debenture No. 1 in aggregate principal amount of $6 million dated February 17, 2004
10.1†	— Agreement for Recoverable Grant Award, dated as of April 1999, by and between State of New Jersey Commission on Science and Technology and Millennium Cell LLC (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)

Exhibit No.	Description
10.2†	— Amended and Restated Agreement, dated as of August 1, 2000, by and among Millennium Cell Inc., GP Strategies Corporation and Steve Amendola (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
10.3†	— Assignment, dated as of May 24, 2000, by Steven Amendola in favor of Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
10.4†	— Employment Agreement, dated as of May 16, 2000, by and between Stephen S. Tang and Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
10.5†	— Employment Agreement, dated as of August 2, 2000, by and between Steven C. Amendola and Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
10.6†	— Amended and Restated Millennium Cell Inc. 2000 Stock Option Plan, Amended effective December 1, 2001 (incorporated by reference to Exhibit 10.6 to the Annual Report on Form 10-K filed on March 25, 2002)
10.7†	— Proprietary Rights Agreement, effective as of May 1, 2000, between DaimlerChrysler Corporation and Millennium Cell Inc. (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
10.8†	— Assignment and Assumption of License Agreement, dated as of December 17, 1998, by and between GP Strategies Corporation and Millennium Cell LLC (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)
10.9†	— Employment Agreement, dated as of September 6, 2000, by and between Millennium Cell Inc. and Norman R. Harpster, Jr. (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed on November 1, 2000)
10.10†	— First Amendment to Lease, dated as of April 4, 2001, by and between Ten-Thirty Five Associates, Limited Partnership and Millennium Cell Inc. (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed on May 11, 2001)
10.11†	— Separation Agreement, dated as of December 11, 2001, by and between Millennium Cell Inc. and Steven C. Amendola (incorporated by reference to Exhibit 10.11 to the Annual Report on Form 10-K filed on March 25, 2002)
10.12†	— Consulting Agreement, dated as of December 11, 2001, by and between Millennium Cell Inc. and Steven C. Amendola (incorporated by reference to Exhibit 10.12 to the Annual Report on Form 10-K filed on March 25, 2002)
10.13†	— Confidentiality Agreement, dated as of December 11, 2001, by and between Millennium Cell Inc. and Steven C. Amendola (incorporated by reference to Exhibit 10.13 to the Annual Report on Form 10-K filed on March 25, 2002)
10.14†	— Securities Purchase Agreement dated as of June 19, 2002 between the Company and the Purchasers (incorporated by reference to Exhibit 4.3 to the Current Report on Form 8-K filed on June 26, 2002)

Exhibit No.	Description
10.15†	— Registration Rights Agreement dated as of June 19, 2002 between the Company and the Purchasers (incorporated by reference to Exhibit 4.4 to the Current Report on Form 8-K filed on June 26, 2002)
10.16†	— Securities Purchase Agreement dated as of October 31, 2002 among the Company and the Purchasers named therein (incorporated by reference to Exhibit 10.16 to Registration Statement No. 333-101061 on Form S-3 filed on November 7, 2002)
10.17†	— Registration Rights Agreement dated as of October 31, 2002 among the Company and the Purchasers named therein (incorporated by reference to Exhibit 10.17 to Registration Statement No. 333-101061 on Form S-3 filed on November 7, 2002)
10.18†	— Option Agreement dated as of November 8, 2002, between the Company and Ballard Power Systems, Inc. (incorporated by reference to Exhibit 10.18 to the Quarterly Report on Form 10-Q filed on November 14, 2002)
10.19†	— Securities Purchase Agreement dated as of November 8, 2002 Company and Ballard Power Systems, Inc. (incorporated by reference to Exhibit 10.19 to the Quarterly Report on Form 10-Q filed on November 14, 2002)
10.20†	— Registration Rights Agreement dated as of November 8, 2002 between the Company and Ballard Power Systems, Inc. (incorporated by reference to Exhibit 10.20 to the Quarterly Report on Form 10-Q filed on November 14, 2002)
10.21†	— Continuing Letter of Credit Agreement dated January 30, 2003 between the Company and Wachovia Bank, National Association (incorporated by reference to Exhibit 10.21 to Registration Statement No. 333-103104 on Form S-3 filed February 11, 2003)
10.22†	— Security Agreement dated January 30, 2003 between the Company and Wachovia Bank, National Association (incorporated by reference to Exhibit 10.22 to the Registration Statement No. 333-103104 on Form S-3 filed on February 11, 2003)
10.23†	— Letter of Credit securing $8.5 million Secured Convertible Debentures (incorporated by reference to Exhibit 10.23 to the Registration Statement No. 333-103104 on Form S-3 filed on February 11, 2003)
10.24†	— Severance, Release and Consulting Agreement between the Company and Norman “Chip” Harpster, Jr. effective February 14, 2003 (incorporated by reference to Exhibit 10.24 to the Annual Report on Form 10-K filed on March 17, 2003)
10.25†	— Amended and Restated Employment Agreement between the Company and Stephen S. Tang dated as of January 1, 2002 (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K filed on March 17, 2003)
10.26†	— Continuing Letter of Credit Agreement dated November 8, 2002 between the Company and Wachovia Bank, National Association relating to the Secured Convertible Debentures issued to Ballard Power Systems, Inc. (incorporated by reference to Exhibit 10.26 to the Annual Report on Form 10-K filed on March 17, 2003)
10.27†	— Security Agreement dated November 8, 2002 between the Company and Wachovia Bank, National Association relating to the Secured Convertible Debentures issued to Ballard Power Systems, Inc. (incorporated by reference to Exhibit 10.27 to the Annual Report on Form 10-K filed on March 17, 2003)

Exhibit No.	Description
10.28†	— Letter of Credit securing $2.4 million Secured Convertible Debentures issued for the benefit of Ballard Power Systems, Inc. (incorporated by reference to Exhibit 10.28 to the Annual Report on Form 10-K filed on March 17, 2003)
10.29†	— Change-in-Control Agreement between the Company and Adam P. Briggs dated as of January 1, 2003 and Schedule of Other Change-in-Control Agreements (incorporated by reference to Exhibit 10.29 to the Annual Report on Form 10-K filed on March 17, 2003)
10.30†	— Change-in-Control Agreement by and between Millennium Cell Inc. and Roland E. Lefebvre (incorporated by reference to Exhibit 10.30 to the Quarterly Report on Form 10-Q filed on August 13, 2003)
10.31†	— Securities Purchase Agreement dated as of January 16, 2004 between the Company and the purchaser named therein. (incorporated by reference to Exhibit 10.24 to Registration Statement No. 333-112519 on Form S-3 filed on February 5, 2004)
10.32†	— Registration Rights Agreement dated as of January 16, 2004 between the Company and the purchaser named therein. (incorporated by reference to Exhibit 10.25 to Registration Statement No. 333-112519 on Form S-3 filed on February 5, 2004)
23.1*	— Consent of Ernst & Young LLP
31.1*	— Certification of Chief Executive Officer and Acting Chief Financial Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002.
32.1*	— Certification of Chief Executive Officer and Acting Chief Executive Officer Pursuant to Section 906 of Sarbanes-Oxley Act of 2002.
99.1†	— License Agreement, dated July 31, 1997, by and between Steven C. Amendola and National Patent Development Corporation (incorporated by reference to the Registration Statement filed on Form S-1, Registration No. 333-37896)

† Previously filed.
* Filed herewith.

The Company will furnish, without charge, to a security holder upon request a copy of the proxy statement, portions of which are incorporated herein by reference thereto. The Company will furnish any other exhibit at cost.

(b) Reports on Form 8-K

The following reports were filed under Form 8-K during the last quarter of the period covered by this report:

Date Filed or Furnished	Item No.	Description
November 3, 2003	Item 12	On October 22, 2003, we reported our financial results for the fiscal quarter ended September 30, 2003.*

* This furnished 8-K is not to be deemed filed or incorporated by reference into any filing.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MILLENNIUM CELL INC.

By: /s/ STEPHEN S. TANG

Stephen S. Tang
President, Chief Executive Officer,
Acting Chief Financial Officer

Date: March 18, 2004

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

Signature	Title	Date
/s/ STEPHEN S. TANG Stephen S. Tang	President, Chief Executive Officer, Acting Chief Financial Officer, and Director	March 18, 2003
/s/ JOHN D. GIOLLI John D. Giolli	Controller and Principal Accounting Officer	March 18, 2003
/s/ G. CHRIS ANDERSEN G. Chris Andersen	Director	March 18, 2003
/s/ KENNETH R. BAKER Kenneth R. Baker	Director	March 18, 2003
/s/ ALEXANDER MACLACHLAN Alexander MacLachlan	Director	March 18, 2003
/s/ PETER A. MCGUIGAN Peter A. McGuigan	Director	March 18, 2003
/s/ ZOLTAN MERSZEI Zoltan Merszei	Director	March 18, 2003
/s/ H. DAVID RAMM H. David Ramm	Director	March 18, 2003
/s/ JAMES L. RAWLINGS James L. Rawlings	Director	March 18, 2003
/s/ RICHARD L. SANDOR Richard L. Sandor	Director	March 18, 2003
/s/ JOHN R. WALLACE John R. Wallace	Director	March 18, 2003

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REPORT OF INDEPENDENT AUDITORS

The Board of Directors and Stockholders
Millennium Cell Inc.

We have audited the accompanying consolidated balance sheets of Millennium Cell Inc. (a development stage company) as of December 31, 2003 and 2002, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years then ended, and for the period January 1, 1999 (inception) through December 31, 2003. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Millennium Cell Inc. at December 31, 2003 and 2002, and the results of its consolidated operations and its cash flows for each of the three years then ended, and for the period January 1, 1999 (inception) through December 31, 2003, in conformity with accounting principles generally accepted in the United States.

/s/ ERNST & YOUNG LLP

New York, New York
February 6, 2004

MILLENNIUM CELL INC.
(a development stage enterprise)

BALANCE SHEET

Assets	December 31, 2003	December 31, 2002
Current assets:		
Cash and cash equivalents	$ 6,004,173	$ 7,987,127
Accounts receivable	41,244	234,015
Prepaid expenses	265,459	337,589
Deferred financing costs	22,663	313,690
Total current assets	6,333,539	8,872,421
Property and equipment, net	1,009,514	1,526,983
Patents and licenses, net	597,564	590,269
Investment in affiliate	—	167,412
Restricted cash	2,998,379	2,963,050
Security deposits	45,676	45,676
	$ 10,984,672	$ 14,165,811
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 272,143	$ 612,651
Accrued expenses	389,464	615,006
Short-term portion of capital lease obligation	37,036	—
Short-term portion of refundable grant obligation	18,675	—
Deferred compensation	32,315	—
Convertible unsecured debentures (net of discount)	684,791	3,029,882
Total current liabilities	1,434,424	4,257,539
Convertible secured debentures	2,399,988	2,399,988
Refundable grant obligation	187,266	227,522
Capital lease obligation	31,909	—
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $.001 par value; 5,000,000 authorized shares, none issued and outstanding	—	—
Common stock, $.001 par value; authorized 70,000,000 shares and 35,029,052 and 29,027,491 shares issued and outstanding as of December 31, 2003 and 2002, respectively	35,029	29,027
Additional paid-in capital	77,784,952	61,679,267
Deferred compensation	(358,427)	—
Deficit accumulated during development stage	(70,530,469)	(54,427,532)
Total stockholders' equity	6,931,085	7,280,762
	$ 10,984,672	$ 14,165,811

See accompanying notes.

MILLENNIUM CELL INC.
(a development stage enterprise)

STATEMENT OF OPERATIONS

	Twelve Months Ended December 31, 2003	Twelve Months Ended December 31, 2002	Twelve Months Ended December 31, 2001	Cumulative Amounts From Inception
Revenue	$ 466,859	$ 719,392	$ —	$ 1,186,251
Cost of revenue	409,449	690,059	—	1,099,508
Gross margin	57,410	29,333	—	86,743
Product development and marketing	5,294,419	5,788,315	5,513,172	16,595,906
General and administrative	3,835,873	4,052,943	4,726,543	15,953,705
Restructuring expense	—	104,982	—	104,982
Non-cash charges	2,164,634	4,148,251	7,341,461	24,439,727
Depreciation and amortization	681,358	710,975	473,031	2,179,191
Research and development	1,020,102	1,515,376	2,624,823	8,112,113
Total operating expenses	12,996,386	16,320,842	20,679,030	67,385,624
Loss from operations	(12,938,976)	(16,291,509)	(20,679,030)	(67,298,881)
Interest income (expense), net	(2,897,077)	300,299	1,226,701	(681,072)
Equity in losses of affiliates	(488,364)	(367,714)	—	(856,078)
Loss before income taxes	(16,324,417)	(16,358,924)	(19,452,329)	(68,836,031)
Benefit from income taxes	221,480	234,963	—	456,443
Net loss	(16,102,937)	(16,123,961)	(19,452,329)	(68,379,588)
Preferred stock amortization	—	—	—	2,150,881
Net loss applicable to common stockholders	$(16,102,937)	$(16,123,961)	$(19,452,329)	$(70,530,469)
Loss per share — basic and diluted	$ (.51)	$ (.58)	$ (.71)	$ (2.61)
Weighted — average number of shares outstanding	31,564,345	28,022,872	27,217,591	27,052,976

See accompanying notes.

MILLENNIUM CELL INC.
(a development stage enterprise)

STATEMENT OF STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-in Capital	Deferred Compensation	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at January 1, 2001	27,167,981	27,168	46,658,927	—	(18,851,242)	27,834,853
Issuance of common stock from exercise of options	48,500	48	140,602	—	—	140,650
Issuance of common stock from exercise of warrants	75,596	76	(76)	—	—	—
Non-cash compensation charges for issuance of stock options	—	—	7,341,461	—	—	7,341,461
Net loss	—	—	—	—	(19,452,329)	(19,452,329)
Balance at December 31, 2001	27,292,077	27,292	54,140,914	—	(38,303,571)	15,864,635
Issuance of common stock in private placement transactions	1,664,058	1,664	2,959,615	—	—	2,961,279
Fair value of warrants issued with unsecured debentures	—	—	491,983	—	—	491,983
Issuance of common stock from exercise of options	28,000	28	81,172	—	—	81,200
Issuance of common stock for 401(k)	43,356	43	82,332	—	—	82,375
Non-cash compensation charges for issuance of stock options	—	—	3,923,251	—	—	3,923,251
Net loss	—	—	—	—	(16,123,961)	(16,123,961)
Balance at December 31, 2002	29,027,491	29,027	61,679,267	—	(54,427,532)	7,280,762
Issuance of common stock upon conversion of debentures	5,468,001	5,468	11,294,533	—	—	11,300,001
Beneficial conversion feature on private placement transactions	—	—	1,356,825	—	—	1,356,825
Fair value of warrants issued with secured debentures	—	—	471,923	—	—	471,923
Issuance of common stock from exercise of options	50,000	50	144,950	—	—	145,000
Issuance of restricted stock in conjunction with exchange offer	197,599	198	395,000	(395,198)	—	—
Common stock under deferred compensation plan	—	—	—	(32,315)	—	(32,315)
Amortization of deferred compensation for restricted stock	—	—	—	69,086	—	69,086
Issuance of common stock to Board of Directors	201,289	201	404,354	—	—	404,555
Issuance of common stock for 401(k)	84,672	85	143,139	—	—	143,224
Non-cash compensation charges for issuance of stock options	—	—	1,894,961	—	—	1,894,961
Net loss	—	—	—	—	(16,102,937)	(16,102,937)
Balance at December 31, 2003	35,029,052	$35,029	$77,784,952	$(358,427)	$(70,530,469)	$ 6,931,085

See accompanying notes.

MILLENNIUM CELL INC.
(a development stage enterprise)
STATEMENT OF CASH FLOWS

	Twelve Months Ended December 31, 2003	Twelve Months Ended December 31, 2002	Twelve Months Ended December 31, 2001	Cumulative Amounts From Inception
Operating activities				
Net loss	$(16,102,937)	$(16,123,961)	$(19,452,329)	$(68,379,588)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	681,358	710,975	473,031	2,179,191
Amortization of discount on unsecured debentures	926,832	21,865	—	948,697
Amortization of deferred financing costs	582,054	14,590	—	596,644
Beneficial conversion feature on PIPE financing	1,356,825	—	—	1,356,825
Losses on investment in affiliate	488,364	367,714	—	856,078
Non-cash charges	2,164,634	4,148,251	7,341,461	24,439,727
Changes in operating assets and liabilities:				
Accounts receivable	192,771	(105,015)	(129,000)	(41,244)
Prepaid expenses and other assets	72,130	14,609	(186,256)	(311,135)
Accounts payable and accrued expenses	(218,856)	(308,796)	684,946	1,091,176
Deferred income	—	(129,000)	129,000	2,399,988
Net cash used in operating activities	(9,856,825)	(11,388,768)	(11,139,147)	(34,863,641)
Investing activities				
Purchase of property and equipment	(7,409)	(999,939)	(956,854)	(2,787,861)
Patent registration costs	(77,591)	(120,099)	(138,440)	(662,224)
Investment in affiliate	(320,952)	(535,126)	—	(856,078)
Increase in restricted cash	(35,329)	(2,374,078)	(588,972)	(2,998,379)
(Purchase)/redemption of held-to-maturity investments, net	—	11,067,175	(11,067,175)	—
Net cash provided by (used in) investing activities	(441,281)	7,037,933	(12,751,441)	(7,304,542)
Financing activities				
Proceeds from sale of common stock	145,000	81,200	140,650	35,139,850
Underwriting and other expenses of initial public offering	—	—	—	(3,669,613)
Proceeds from issuance of secured debentures	8,500,000	—	—	8,500,000
Proceeds from issuance of unsecured debentures	—	3,500,000	—	3,500,000
Proceeds from equity private placement	—	2,736,279	—	2,736,279
Deferred financing costs	(291,027)	(328,280)	—	(619,307)
Capital lease obligation payments	(17,239)	—	—	(17,239)
Proceeds from capital contribution	—	—	—	500,000
Payment of note payable	—	—	—	(250,000)
Proceeds from grant, net	(21,582)	—	—	205,940
Proceeds from sale of preferred stock	—	—	—	2,146,446
Net cash provided by financing activities	8,315,152	5,989,199	140,650	48,172,356
Net increase (decrease) in cash and cash equivalents	(1,982,954)	1,638,364	(23,749,938)	6,004,173
Cash and cash equivalents, beginning of period	7,987,127	6,348,763	30,098,701	—
Cash and cash equivalents, end of period	$ 6,004,173	$ 7,987,127	$ 6,348,763	$ 6,004,173

Supplemental Cash Flow Data:

Interest paid during 2003 and 2002 totaled $104,337 and $2,722, respectively. There was no interest paid in 2001.

Non-Cash Transactions:

The Company funded the vested matching contributions to the plan with 84,672 and 43,356 shares of common stock with an issued market value of $143,224 and $82,375 in fiscal 2003 and 2002, respectively. The Company obtained a capital lease for software purchases in the amount of $86,184 in 2003. In November 2002, the Company and Ballard Power Systems agreed to convert a cash advance for deferred royalty income paid by Ballard in October 2000 to a strategic investment in the form of Secured Debentures of $2.4 million.

See accompanying notes.

MILLENNIUM CELL INC.
(a development stage enterprise)

NOTES TO FINANCIAL STATEMENTS

Note 1 — Basis of Presentation

Millennium Cell Inc. (the "Company"), which was formed to acquire substantially all of the assets of the Battery Technology Group of GP Strategies Corporation ("GPS"), was incorporated on December 17, 1998 and organized on January 1, 1999 (inception).

The Company is a development stage company, as defined in Statement of Financial Accounting Standards No. 7, "Accounting and Reporting by Development Stage Enterprises." The Company was formed based on an invented, patented and developed proprietary chemical process ("Invention") that generates hydrogen and electricity from safe, environmentally friendly raw materials. The Company's core capability is in the design of a sodium borohydride process which can generate hydrogen as a high-energy fuel for the transportation and fuel cell markets. The Company has also designed and produced prototype direct fuel cells and batteries that utilize the sodium borohydride process to provide electricity for the portable and stationary power markets.

Note 2 — Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of Millennium Cell Inc. and its wholly owned subsidiary, MCE Ventures LLC. MCE Ventures is a Delaware limited liability corporation that was formed in 2002 to engage in limited strategic investment activities. All significant inter-company transactions and accounts have been eliminated.

Cash and Cash Equivalents

The Company considers all highly liquid instruments purchased with an initial maturity of three months or less to be cash equivalents.

Concentration of Credit Risk

Financial instruments, which potentially expose the Company to concentrations of credit risk, consist principally of cash investments and trade receivables. The Company places its cash investments with highly rated financial institutions. At times, such investments may be in excess of the FDIC insurance limit. The Company's limited customer base increases its concentrations of credit risk with respect to trade receivables. The Company routinely assesses the financial strength of its customers.

Long-Lived Assets

The Company records impairment losses on long-lived assets when events and circumstances indicate that the assets might be impaired and the undiscounted estimated cash flows to be generated by the related assets are less than the carrying amount of those assets. To date, no impairments have occurred.

Property and Equipment

Property and equipment are stated at cost. The Company provides for depreciation and amortization using the straight-line method over their estimated useful lives as follows:

Asset Classification	Estimated Useful Life
Machinery and equipment	3 years
Furniture and fixtures	3 years
Leasehold improvements	7 years

Leasehold improvements are amortized over the estimated useful lives of the assets or related lease terms, whichever is shorter. Repairs and maintenance are charged to expense as incurred.

Patents and Licenses

Certain costs associated with obtaining and licensing patents and trademarks are capitalized as incurred and are amortized on a straight-line basis over their estimated useful lives of 10 to 17 years, unless the asset is determined to be impaired. Amortization of such costs begins once the patent has been issued. The Company evaluates the recoverability of its patent costs when events and circumstances indicate that the assets might be impaired and the undiscounted estimated cash flows to be generated by the related assets are less than the carrying amount of those assets.

Investment in Affiliate

In July 2002, the Company agreed to acquire a 50% non-controlling interest in a European alkaline fuel cell company (the "Affiliate"). During the period from July 2002 to June 2003, the Company directly and indirectly provided limited funding for their proportionate share of the Affiliate's operating expenses. In the ordinary course of business, the Company had related party transactions directly and indirectly with a member of the Company's Board of Directors who provided professional services for the Affiliate in 2002 and 2003. Such payments amounted to $45,000 during the year ended December 31, 2003.

As of June 30, 2003, the Company had written off its Investment in Affiliate on the balance sheet and determined the fair value of the investment was zero. During the third quarter of 2003, the Company decided to abandon its interest in the Affiliate and no gain or loss was recognized upon this event.

Restricted Cash

Cash that is pledged as collateral under the Company's amended facilities lease agreement and the secured debentures issued to Ballard Power Systems is classified as restricted cash on the balance sheet.

Revenue Recognition

Revenues for the year ended December 31, 2003 were derived primarily from engineering and design services and sales of prototype systems to customers to evaluate and demonstrate the Company's technology.

The Company's near term revenues will be derived substantially from contracts that require the Company to deliver engineering, design and management services, hydrogen generation technology, prototype systems and licensing of technology. Revenues will be recognized in the period in which the services are performed, technology and/or prototype is delivered or licensed revenue is earned.

Product Development and Marketing Costs

Product development and marketing costs are expensed as incurred.

Research and Development Costs

Research and development costs are expensed as incurred.

Stock Based Compensation

In December 2002, the Financial Accounting Standards Board ("FASB") issued FAS No. 148, Accounting for Stock-Based Compensation-Transition and Disclosure. FAS 148 amends FAS No. 123, Accounting for Stock-Based Compensation, to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee

compensation. In addition, FAS 148 amends the disclosure requirements of FAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock based employee compensation and the effect of the method used on reported results. The provisions of FAS 148 are effective for financial statements for fiscal years and interim periods ending after December 15, 2002. The disclosure provisions of FAS 148 have been adopted by the Company. FAS 148 did not require the Company to change to the fair value based method of accounting for stock-based compensation.

Statement of Financial Accounting Standards (SFAS) No. 123, "Accounting for Stock-Based Compensation" encourages, but does not require, companies to record compensation cost for stock-based employee compensation plans at fair value. The Company has elected to account for stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25").

The following table illustrates the effect on net loss and loss per share if the Company had applied the fair value recognition provisions of SFAS 123 to stock-based employee compensation:

	Years Ended December 31,		
	2003	2002	2001
Net loss attributable to common stockholders — As reported	$(16,102,937)	$(16,123,961)	$(19,452,329)
Plus: Stock-based compensation expense included in reported net loss	2,164,634	4,148,251	7,341,461
Less: Total stock-based compensation expense determined using the fair value method	(6,125,215)	(6,907,045)	(7,182,134)
Net loss attributable to common stockholders — Pro forma	$(20,063,518)	$(18,882,755)	$(19,293,002)
Net loss per share attributable to common stockholders — As reported	$(0.51)	$(0.58)	$(0.71)
Net loss per share attributable to common stockholders — Pro forma	$(0.64)	$(0.67)	$(0.71)

The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions:

	Years Ended December 31,		
	2003	2002	2001
Expected dividend yield	—	—	—
Expected stock price volatility	.69	.69	.83
Risk-free interest rate	3.68%	3.68%	3.07% – 4.79%
Expected option term	5 years	5 years	3 years

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price

volatility. The Company's options have characteristics significantly different from those of traded options, and changes in the subjective input assumptions can materially affect the fair value estimate. Based upon the above assumptions, the weighted average fair value of stock options granted at market was $1.44, $3.10 and $4.13 in fiscal 2003, 2002 and 2001, respectively.

Earnings Per Share

Basic earnings per share (EPS) is computed by dividing income available to common stockholders by the weighted average number of common shares actually outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the Company. Basic and diluted EPS were the same for all periods presented herein.

Options to purchase 4,422,476, 4,345,829 and 4,766,720 shares of common stock have not been included in the computation of diluted net loss per share for the years ended December 31, 2003, 2002 and 2001, respectively, as their effects would have been antidilutive.

Warrants to purchase 1,248,069, 658,693 and 400,000 shares of common stock have not been included in the computation of diluted net loss per share for the years ended December 31, 2003, 2002 and 2001, respectively, as their effects would have been antidilutive.

Income Taxes

The Company uses the liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between financial statement and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. Recognition of deferred tax assets is limited to amounts considered by management to be more likely than not realized in future periods.

Use of Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications

Amounts previously reported as "Product Development and Engineering" have been reclassified and shown as "Research and Development" for all periods presented. Additionally, sales of net operating losses in the State of New Jersey previously recorded as "Other Income" have been reclassified and shown as "Benefit from Income Taxes" for all periods presented. Certain other amounts have been reclassified to conform to the current year's presentation.

Note 3 — Income Taxes

The components of the provision (benefit) for income taxes are as follows:

	Year Ended December 31,		
	2003	2002	2001
Current benefit:			
Federal	$ —	$ —	$—
State	(221,480)	(234,963)	—
Deferred provision:			
Federal	—	—	—
State	—	—	—
Total	$(221,480)	$(234,963)	$—

The income tax benefits recorded for the years ended December 31, 2003 and 2002 were derived from the Company's participation in the New Jersey Emerging Technology and Biotechnology Financial Assistance Program. This program allows certain qualified companies to be compensated for the transfer of their New Jersey net operating losses to other companies.

Significant components of the Company's net deferred taxes as of December 31, 2003 and 2002 are as follows:

	December 31,	
	2003	2002
Deferred tax assets:		
Stock based compensation	$ 8,457,000	$ 7,734,000
Net operating loss carryforwards	15,907,000	10,641,000
Research and development credits	920,000	728,000
Depreciation	396,000	151,000
Deferred revenue	827,000	827,000
Other	200,000	191,000
Valuation reserve	(26,707,000)	(20,272,000)
Net deferred tax assets	$ —	$ —

As of December 31, 2003, the Company had available net operating loss carryforwards of approximately $40,000,000 for federal income tax purposes and approximately $34,000,000 for state income tax purposes. The federal carryforwards will begin to expire in 2020, and the state carryforwards will begin to expire in 2007. In addition, at December 31, 2003 the Company also had available federal research and development tax credit carryforwards of approximately $920,000 that begin to expire in 2020.

The reconciliation of income tax expense computed at the U.S. federal statutory rate to the recorded provision (benefit) for income taxes is as follows:

	Year Ended December 31,					
	2003		2002		2001	
Tax at U.S. statutory rate	$(5,636,000)	(35.0)%	$(5,643,000)	(35.0)%	$(6,808,000)	(35.0)%
State tax (benefit), net of Federal tax effect	(942,000)	(5.8)	(943,000)	(5.8)	(1,138,000)	(5.8)
Research and experimentation tax credits	(193,000)	(1.2)	(248,000)	(1.5)	(359,000)	(1.8)
Other	94,000	.5	113,000	.7	160,000	.8
Valuation allowance	6,455,520	40.1	6,486,037	40.2	8,145,000	41.8
Provision (benefit) for income taxes	$ (221,480)	(1.4)%	$ (234,963)	(1.4)%	$ —	—%

Note 4 — Property and Equipment

Property and equipment consist of the following at December 31:

	2003	2002
Machinery and equipment	$ 1,232,070	$ 1,144,527
Furniture and fixtures	402,125	402,125
Leasehold improvements	1,290,078	1,284,028
	2,924,273	2,830,680
Accumulated depreciation	(1,914,759)	(1,303,697)
Property and equipment, net	$ 1,009,514	$ 1,526,983

The Company recorded depreciation expense of $611,062, $650,439, and $425,223 for the fiscal years ended December 31, 2003, 2002 and 2001, respectively.

In the second quarter of 2003, the Company entered into a three-year capital lease for approximately $86,000 to purchase software. The software is classified as machinery and equipment and the amortization of the leased assets are included in depreciation expense in the accompanying financial statements. The lease term is 3 years and contains a bargain purchase option at the end of the lease.

Note 5 — Patents and Licenses

Patent and license costs consist of the following at December 31:

	2003	2002
Patent and license costs	$ 812,224	$ 734,633
Accumulated amortization	(214,660)	(144,364)
	$ 597,564	$ 590,269

The Company recorded amortization expense of $70,296, $60,536, and $47,808 for the fiscal years ended December 31, 2003, 2002 and 2001, respectively. Amortization of patents and licenses is estimated to be approximately $69,000 per year over the next five years and $253,000 thereafter.

Note 6 — Product Development Agreement

In October 2000, the Company received $2.4 million in cash from Ballard Power Systems Inc. as an advance for prospective royalties pursuant to a product development agreement between Ballard

and the Company. In addition, the Company granted to Ballard a warrant to purchase up to 400,000 shares of common stock, which was terminated as part of the strategic investment discussed below. Upon completion of certain stages of product development, the parties agreed to negotiate in good faith for the grant of a license of the Company's technology to Ballard in certain fields of use, at which time prepaid royalties may be earned and the warrants will be issued and recorded at fair value.

On November 8, 2002, the Company agreed with Ballard that the product development milestones have been achieved and agreed to convert the $2.4 million refundable royalty payment into an investment in the Company in the form of secured convertible debentures due November 8, 2005. The Ballard debentures are secured by a standby letter of credit issued by Wachovia Bank, National Association, with an aggregate face amount equal to the outstanding principal. The Company pledged to the bank as collateral $2.4 million of funds previously reported under cash and cash equivalents on the accompanying balance sheet. The Company does not have the ability to use this cash until the bank pledges are released upon conversion of the Ballard debentures to common stock. The debentures are convertible at a conversion price of $4.25, subject to anti-dilution adjustments and certain price protection in the event the Company initiates the conversion. As part of the purchase agreement entered into between Ballard and the Company, Ballard retains the option to license the non-exclusive right to manufacture and sell products with the Company's *Hydrogen on Demand*™ technology for specific portable fuel cell products and stationary internal combustion engine generators.

Note 7 — Grant Obligation

Between January 1999 and April 2000, the Company received an aggregate of $227,522 from a recoverable grant award from the State of New Jersey Commission on Science and Technology. The funds were used to partially fund costs directly related to development of our technology. The recoverable grant is required to be repaid when the Company generates net sales in a fiscal year. The repayment obligation, which began in June 2001, ranges from 1% to 5% of net sales over a ten-year period. The Company is obligated to repay the unpaid amount of the original grant at the end of the ten-year period. The Company repaid approximately $21,000 of the award during the second quarter of 2003, which represents 3% of the 2002 net sales. Based upon 4% of the 2003 net sales, $18,675 is due to be repaid in 2004.

Note 8 — Commitments And Contingencies

In April 2001, the Company amended its main operating lease to provide for additional space for the Company's principal operating offices and laboratories. The amended lease will expire in 2008 and will contain options to renew for an additional 8 years and will require the Company to pay its allocated share of taxes and operating cost in addition to the annual base rent payment. Future minimum annual lease commitments including estimated allocated taxes and maintenance under the amended operating leases are as follows:

2004	484,310
2005	484,310
2006	484,310
2007	484,310
2008	443,950
Total	$2,381,190

Rent expense under the operating lease was $546,710, $507,310 and $288,498 for the years ended December 31, 2003, 2002, and 2001, respectively.

In connection with the amended lease agreement, the Company issued a letter of credit to the landlord for $588,972 in lieu of a cash security deposit. The letter of credit was collateralized with a portion of the Company's cash and is classified as Restricted Cash. The funds used for collateral will not be available for use in operations.

From time to time, the Company is involved in litigation relating to claims arising in the normal course of business. The Company does not believe that any such litigation would have a material adverse effect on our results of operations or financial condition.

Note 9 — Capital Transactions

In May 2000, in exchange for approximately $2.2 million, the Company sold 759,368 shares of Series A preferred stock, which automatically converted into 759,368 shares of common stock upon completion of the Company's initial public equity offering in August 2000. As the issuance price was substantially less than the initial public offering price the Company incurred additional preferred dividends of approximately $2.2 million from the date of issuance to the initial public offering.

Also in May 2000 (as amended in August 2000), the Company terminated a royalty agreement with GPS and Steven Amendola by issuing to them options to purchase 250,000 common shares at the initial public offering price and 206,897 shares of common stock, respectively. These agreements resulted in a non-cash charge of approximately $2.8 million.

In September 2000, the Company completed its initial public offering issuing 3,352,300 shares resulting in net proceeds to the Company of approximately $29.9 million.

In December 2001, the Company entered into a separation agreement with Steven C. Amendola, its then chief scientific advisor ("CSA") and also entered into a consulting agreement and a confidentiality agreement with a company wholly owned by the CSA, which expired in September 2002. The significant terms of the agreements are:

- $230,000 of severance to the CSA was paid in 2001.
- Accelerated vesting of 166,607 stock options initially granted to the CSA while he was an employee of the Company under the Amended and Restated 2000 Stock Option Plan. This resulted in a non-cash charge of $142,602. Forfeiture by the CSA of approximately 503,321 unvested options. CSA's total vested options equaled 503,322 at December 31, 2001.
- The agreements also require the CSA to honor certain non-compete restrictions.

On June 19, 2002, the Company entered into a private placement financing transaction with two institutional and accredited investors pursuant to the terms of a securities purchase agreement among the Company and the purchasers. The private placement was exempt from registration under the Securities Act of 1933, as amended, pursuant to Section 4(2) of such Act. The placement consisted of the sale of 1,075,269 shares of common stock for gross proceeds of $3.0 million and warrants to purchase 268,817 shares of common stock (with an exercise price of $3.93 per share).

On October 31, 2002, the Company entered into a separate private placement financing transaction with the same two institutional and accredited investors pursuant to the terms of a new purchase agreement among the Company and the purchasers. The private placement was exempt from registration under the Securities Act of 1933, as amended, pursuant to Section 4(2) of such Act. The placement consisted of the sale of 588,790 shares of common stock and warrants (with an exercise price of $2.32) to purchase 147,198 shares of common stock of the Company for gross proceeds of $1.0 million. Pursuant to the terms of the purchase agreement, one of the investors agreed to acquire $12 million of secured and unsecured debentures, convertible into common stock of the Company, subject to certain terms and conditions, and warrants.

In December 2002, the Company issued convertible unsecured debentures with a principal amount of $3.5 million. As of June 30, 2003, the entire $3.5 million of unsecured debentures had been converted into 2,094,048 shares of common stock.

On January 23, 2003, the Company's shareholders approved the issuance of $8.5 million of secured convertible debentures and warrants to acquire 589,376 shares. The secured debentures were issued on January 30, 2003. During the third quarter of 2003, the Company exchanged all outstanding secured convertible debentures for unsecured convertible debentures and registered the common shares underlying all of the unsecured convertible debentures. As a result, the letter of credit securing the secured convertible debentures was released. During the third and fourth quarters of 2003, the Company converted approximately $7.8 million of the unsecured convertible debentures into 3,373,953 shares of common stock. As a result, approximately $0.7 million of unsecured convertible debentures were outstanding as of December 31, 2003. These debentures were converted to common shares in January 2004.

In accordance with APB No. 14, "Accounting for Convertible Debt and Debt Issued with Stock Purchase Warrants", the Company determined that the fair value of the debentures issued in December 2002 and in January 2003 (the "Convertible Debentures") were $11,036,195 upon issuance. The resulting discount is being amortized as interest expense, using the effective interest method, over the original maturity period of the debentures or ratably as they are converted, whichever comes first. During the year ended December 31, 2003, the Company recognized a non-cash charge to interest expense of $926,832 for discount amortization on debentures.

In accordance with Emerging Issues Task Force ("EITF") No. 00-27, "Application of Issue No. 98-5 to Certain Convertible Instruments", and EITF No. 98-5, "Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios", and after considering the terms of the Convertible Debentures, the Company determined that the debentures contained a beneficial conversion feature ("BCF"). The BCF existed because of a discount that was given to the investor for the company-initiated conversion of the debentures. These discounts ranged from 4% to 12%, depending on the amount of debentures converted into common stock. Accordingly, at the time of conversion, the Company recorded as interest expense the applicable BCF based on the fair value of the conversion feature on that date. During the year ended December 31, 2003, approximately $11.3 million of debentures were converted at the option of the Company and BCF charges of $1,356,825 were recorded.

Note 10 — Rabbi Trust

In 2003, the Company established a deferred compensation arrangement whereby a portion of certain Board of Directors fees could be withheld and placed in a Rabbi Trust at their option. The Company adopted the provisions of Emerging Issues Task Force (EITF) 97-14 "Accounting for Deferred Compensation Arrangement Where Amounts are Earned and Held in a Rabbi Trust and Invested" which requires the Company to consolidate into its financial statements the net assets of the trust. The deferred compensation obligation has been classified as a current liability. The total value of the Rabbi Trust was $32,315 and is included in Additional Paid-in Capital at December 31, 2003 as the deferred compensation is in the form of the Company's common stock.

Note 11 — Stock Options and Employee Benefit Plans

2000 Stock Option Plan

In July 2000, the Company adopted the Amended and Restated 2000 Stock Option Plan. 8,500,000 shares of common stock have been reserved for issuance under the plan. The plan provides for the granting of the following types of awards: stock options, stock warrants, stock appreciation

rights, restricted stock awards, performance unit awards and stock bonus awards. Options and warrants issued under this plan have a life of ten years and generally vest ratably over three years. The specific terms and conditions of awards granted under the plan are specified in a written agreement between the Company and the participant.

The following table summarizes option and warrant activity under the Plan:

	Number Of Options And Warrants	Weighted Average Exercise Price Per Share
Balance at December 31, 2000	3,684,471	$3.87
Granted at fair value	1,714,166	7.21
Forfeited or terminated	(507,821)	2.91
Exercised	(124,096)	2.90
Balance at December 31, 2001	4,766,720	5.09
Granted at fair value	5,000	5.16
Forfeited or terminated	(397,891)	5.57
Exercised	(28,000)	2.90
Balance at December 31, 2002	4,345,829	5.06
Granted at fair value	1,122,840	2.30
Forfeited or terminated	(996,093)	7.46
Exercised	(50,000)	2.90
Balance at December 31, 2003	4,422,576	$3.84

The following is additional information relating to options and warrants granted and outstanding under the plan as of December 31, 2003:

Exercise Price Range	Options Outstanding	Weighted Average Exercise Price	Remaining Weighted Average Life (Years)	Options Exercisable	Weighted Average Exercise Price
$ 2.01 - $ 2.90	3,526,438	$ 2.72	7.9	3,018,157	$ 2.79
$ 4.00 - $ 9.58	444,272	5.89	8.0	372,304	6.19
$10.00 - $19.63	451,866	10.57	7.1	451,866	10.57
	4,422,576	$ 3.84	7.8	3,842,327	$ 4.03

The stock option tables above exclude 197,599 shares of restricted stock issued under the 2000 Stock Option Plan in conjunction with the tender exchange offer in August 2003, of which 197,055 shares are outstanding but not exercisable. The shares vest ratably over 2 years or when the closing price of the Company's common stock reaches $4.25 (first 50% vests immediately) and $5.10 (second 50% vests immediately).

The Company recorded non-cash charges of approximately $1.7 million, $3.8 million and $5.9 million in 2003, 2002, and 2001, respectively, related to options issued below market to employees and the Board of Directors in 2000 and charges related to restricted stock issued in conjunction with our tender offer in August 2003 as discussed below under the heading "Tender Exchange Offer."

The Company also incurred non-cash charges of $0.5 million, $0.1 million and $1.4 million in 2003, 2002, and 2001, respectively, related to the fair value of warrants issued to affiliates. The accounting methodology for these warrants requires a re-valuing of the warrants at each period ending market price using a Black-Scholes pricing model. Due to the variable nature of this accounting

methodology, it is difficult to predict the amount of additional non-cash charges the Company will incur related to these warrants during future periods.

The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions:

	Years Ended December 31,		
	2003	2002	2001
Expected dividend yield	—	—	—
Expected stock price volatility	.69	.69	.83
Risk-free interest rate	3.68%	3.68%	3.07% – 4.79%
Expected option term	5 years	5 years	3 years

Savings Plan

In December 2000, the Company enacted a savings plan that complies with Section 401(k) of the Internal Revenue Code. The plan allows employees to contribute a portion of their compensation on a pre-tax and/or after-tax basis in accordance with specified guidelines. The Company matches in company stock in July and December of each fiscal year, on a one to one basis the vested portion of employee contributions up to 6% of eligible compensation. Employee contributions to this plan began in January 2001. Employer matching stock contributions vest ratably over 3 years based on the length of service of the employee. The Company funded the vested matching contributions to the plan with 84,672 and 43,356 shares of common stock with an issued market value of $143,224 and $82,375 in fiscal 2003 and 2002, respectively. The Company has reserved 180,000 shares of common stock for the 401(k) plan.

Tender Exchange Offer

In August 2003, the Company exchanged 835,500 eligible stock options for 197,599 shares of restricted stock related to an exchange offer. This offer allowed eligible plan participants to exchange options for restricted stock at an exchange rate based on the calculated market value of the stock options using a black-scholes model. In fiscal 2003, the Company recorded $67,656 related to the vesting of the restricted stock. The Company will recognize total non-cash charges in the amount of $395,198 ratably over the remaining vesting period of the restricted stock (two years or upon the closing price of the Company's common stock reaching $4.25 (first 50% vests immediately) and $5.10 (second 50% vests immediately)).

Note 12 — Related Party Transaction

In the ordinary course of business, the Company had related party transactions directly and indirectly with a member of the Company's Board of Directors who provided professional services for an affiliate of the Company. Such payments amounted to $45,000 during the year ended December 31, 2003.

Note 13 —Subsequent Financing Event

In January 2004, the Company entered into a private placement financing transaction with an institutional and accredited investor pursuant to the terms of a securities purchase agreement among the Company and the purchaser. The private placement was exempt from registration under the Securities Act of 1933, as amended, pursuant to Section 4(2) of such Act. Pursuant to the terms of the agreement, the investor agreed to acquire up to $10 million of unsecured debentures, convertible into common stock of the Company, subject to certain terms and conditions.

The registration of shares underlying the debentures was declared effective by the SEC on February 17, 2004 and a $6.0 million unsecured debenture was issued to the investor on that date at

an initial conversion price of $3.30, subject to certain terms and conditions. The additional $4 million of unsecured convertible debentures will be issued to the investor at the sole option of the Company, provided that at least $4 million of the $6 million debenture has been converted into common stock in accordance with the terms of such debenture, and the Company is in compliance in all material respects with the private placement documents. Under the terms of the agreement, cash fees of $400,000 were deducted from the initial proceeds and 140,180 shares of common stock were issued to the holder of the debentures upon closing of the transaction. The market value of these shares and the cash fees will be recorded as a discount on the debentures and amortized over the term of the debentures or as they are converted, whichever happens first. The debentures will mature in 18 months and are subject to six, 30-day extensions and bear interest at 6% with payments due quarterly.

NOTES TO FINANCIAL STATEMENTS — (Continued)

Note 14 — Quarterly Information (Unaudited) (1)

	Fiscal Year Quarters				
	First	Second	Third	Fourth	Total
	(in 000's, except per share amounts)				
Fiscal Year ended December 31, 2003					
Revenue	$ 55	$ 238	$ 103	$ 71	$ 467
Cost of revenue	55	190	93	70	409
Gross Margin	—	48	10	—	57
Product development & marketing	1,231	1,291	1,497	1,275	5,294
General and administrative	1,070	1,034	737	995	3,836
Non-cash charges	1,095	852	419	(201)	2,165
Depreciation and amortization	175	166	153	186	681
Research and development	305	271	222	222	1,020
Total operating expenses	3,878	3,614	3,027	2,476	12,996
Loss from operations	(3,878)	(3,567)	(3,017)	(2,476)	(12,939)
Interest income (expense) (2)	(516)	(338)	(1,464)	(579)	(2,897)
Equity in losses of affiliates	(294)	(194)	—	—	(488)
Loss before income taxes	(4,688)	(4,099)	(4,481)	(3,055)	(16,324)
Benefit from income taxes	—	—	—	221	221
Net loss	(4,688)	(4,099)	(4,481)	(2,834)	(16,103)
Loss per share — basic and diluted	$ (.16)	$ (.13)	$ (.14)	$ (.08)	$ (.51)
Weighted — average number of shares outstanding	29,402	30,452	31,945	34,555	31,564

	First	Second	Third	Fourth	Total
	(in 000's, except per share amounts)				
Fiscal Year ended December 31, 2002					
Revenue	$ 360	$ 20	$ 106	$ 233	$ 719
Cost of revenue	360	20	106	204	690
Gross Margin	—	—	—	29	29
Product development & marketing	1,729	1,470	1,313	1,277	5,788
General and administrative	1,498	981	891	683	4,053
Restructuring expense	—	105	—	—	105
Non-cash charges	1,118	1,075	988	967	4,148
Depreciation and amortization	174	181	180	176	711
Research and development	364	541	249	362	1,515
Total operating expenses	4,883	4,353	3,621	3,465	16,321
Loss from operations	(4,883)	(4,353)	(3,621)	(3,436)	(16,292)
Interest income (expense)	158	96	52	(6)	300
Equity in losses of affiliates	—	—	—	(368)	(368)
Loss before income taxes	(4,725)	(4,256)	(3,569)	(3,809)	(16,359)
Benefit from income taxes	—	—	—	235	235
Net loss	(4,725)	(4,256)	(3,569)	(3,574)	(16,124)
Loss per share — basic and diluted	$ (.17)	$ (.15)	$ (.13)	$ (.12)	$ (.58)
Weighted — average number of shares outstanding	27,306	27,507	28,428	28,829	28,023

(1) Some columns and rows may not foot or cross-foot due to rounding.

(2) In the fourth quarter of 2003, the Company determined that non-cash interest expense was overstated by $.01 per share in the first and third quarters of 2003 and $.02 per share in the second quarter of 2003. Accordingly, non-cash interest expense was cumulatively adjusted in the fourth quarter. Management believes the impact to each of the quarters was not material.

Exhibit 23.1

CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-47086) pertaining to the Millennium Cell Inc. Amended and Restated 2000 Stock Option Plan, of our report dated February 6, 2004 with respect to the consolidated financial statements of Millennium Cell Inc. included in the Annual Report (Form 10-K) for the year ended December 31, 2003.

/s/ ERNST & YOUNG LLP

New York, New York
March 17, 2004

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen S. Tang, President, Chief Executive Officer and Acting Chief Financial Officer of Millennium Cell Inc., certify that:

1. I have reviewed this Annual Report on Form 10-K of Millennium Cell Inc.;

2. Based on my knowledge, this Annual Report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Annual Report;

3. Based on my knowledge, the financial statements, and other financial information included in this Annual Report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this Annual Report;

4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this Annual Report (the "Evaluation Date"); and

c) presented in this Annual Report conclusions about the effectiveness of the disclosure controls and procedures based on my evaluation as of the Evaluation Date; and

5. I have disclosed, based on my most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weakness in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls.

/s/ Stephen S. Tang
Stephen S. Tang
President, Chief Executive Officer &
Acting Chief Financial Officer

March 18, 2004

Exhibit 32.1

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 (18 U.S.C. SECTION 1350)

Stephen S. Tang, President, Chief Executive Officer and Acting Chief Financial Officer of Millennium Cell Inc. (the "Company"), has executed this certification in connection with the filing with the Securities and Exchange Commission of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003 (the "Report") and does hereby certify, pursuant to § 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. § 1350) that to his knowledge:

1. The Report fully complies with the requirements of Section 13(a) and 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

A signed original of this written statement has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

/s/ Stephen S. Tang
Stephen S. Tang
President, Chief Executive Officer &
Acting Chief Financial Officer

March 18, 2004