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

Post Effective Amendment No. 1 to

FORM SB-2

on

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

NOVELOS THERAPEUTICS, INC.

(Name of small business issuer in its charter)

Delaware

*(State or other jurisdiction
of incorporation or organization)*

2834

*(Primary Standard Industrial
Classification Code Number)*

04-3321804

*(I.R.S. employer
identification number)*

**One Gateway Center
Suite 504**

**Newton, Massachusetts 02458
(617) 244-1616**

(Address and telephone number of principal executive offices)

**Harry S. Palmin
President and Chief Executive Officer**

**Novelos Therapeutics, Inc.
One Gateway Center, Suite 504
Newton, Massachusetts 02458
(617) 244-1616**

(Name, address and telephone number of agent for service)

Copies to:

**Paul Bork, Esq.
Foley Hoag LLP
155 Seaport Boulevard
Boston, Massachusetts 02110
(617) 832-1000**

Approximate date of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 ("Securities Act"), check the following box. ☒

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

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

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

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. ☐

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

(Check one):

Large accelerated filer ☐

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☒

(Do not check if a smaller reporting company)

Explanatory Note:

This Post Effective Amendment No. 1 on Form S-1 is intended to supplement and amend the Registrant's Registration Statement on Form SB-2, File No. 333-143263, which was filed on August 29, 2007. The primary purpose of this post-effective amendment is to include the Registrant's financial statements for the fiscal year ended December 31, 2007 and corresponding updated information about the business of the Registrant into the prospectus forming a part hereof. No additional securities have been registered.

The registrant hereby amends this post-effective amendment to the registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this post-effective amendment to the registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The selling stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and the selling stockholders are not soliciting offers to buy these securities, in any state where the offer or sale of these securities is not permitted.

Subject to completion dated April 16, 2008

PROSPECTUS

12,000,000 shares of common stock

NOVELOS THERAPEUTICS, INC.

This prospectus relates to the resale, from time to time, of up to 12,000,000 shares of our common stock by the stockholders referred to throughout this prospectus as “selling stockholders.” The shares of our common stock offered in this prospectus are issuable on conversion of a portion of the outstanding shares of our Series D Preferred Stock

The selling stockholders will receive all of the proceeds from the sales made under this prospectus. Accordingly, we will receive no part of the proceeds from sales made under this prospectus. We are paying the expenses incurred in registering the shares, but all selling and other expenses incurred by the selling stockholders will be borne by the selling stockholders.

Our common stock is quoted on the OTC Electronic Bulletin Board of the National Association of Securities Dealers, Inc. under the symbol “NVL.T.OB.” On April 14, 2008, the last reported sale price of our common stock on the OTC Electronic Bulletin Board was \$0.46 per share.

**Investing in our common stock involves a high degree of risk.
See risk factors beginning on page 8 of this prospectus.**

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is April [], 2008

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No dealer, salesperson or other person has been authorized to give any information or to make any representations other than those contained in this prospectus in connection with the offer contained in this prospectus and, if given or made, such information or representations must not be relied upon as having been authorized by us.

Neither the delivery of this prospectus nor any sale made hereunder shall under any circumstances create an implication that there has been no change in our affairs since the date hereof. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy securities other than those specifically offered hereby or of any securities offered hereby in any jurisdiction where, or to any person to whom, it is unlawful to make such offer or solicitation. The information contained in this prospectus speaks only as of the date of this prospectus unless the information specifically indicates that another date applies.

This prospectus has been prepared based on information provided by us and by other sources that we believe are reliable. This prospectus summarizes certain documents and other information in a manner we believe to be accurate, but we refer you to the actual documents, if any, for a more complete understanding of what we discuss in this prospectus. In making a decision to invest in the common stock, you must rely on your own examination of us and the terms of the offering and the common stock, including the merits and risks involved.

We are not making any representation to you regarding the legality of an investment in our common stock under any legal investment or similar laws or regulations. You should not consider any information in this prospectus to be legal, business, tax or other advice. You should consult your own attorney, business advisor and tax advisor for legal, business and tax advice regarding an investment in our common stock.

PROSPECTUS SUMMARY

The following summary highlights certain material aspects of the offering for resale of common stock by the selling stockholders covered by this prospectus but may not contain all of the information that is important to you. You should read this summary together with the more detailed information regarding our company, our common stock and our financial statements and notes to those statements appearing elsewhere in this prospectus, including the "RISK FACTORS" beginning on page 8.

Business

We were incorporated in June 1996 as AVAM International, Inc. In October 1998, Novelos Therapeutics, Inc., a newly incorporated entity, merged into AVAM, and the name of AVAM was changed to Novelos Therapeutics, Inc. In 2005, we completed a two-step reverse merger with Common Horizons, Inc., and its wholly-owned subsidiary Nove Acquisition, Inc. Following the merger, the surviving company was Novelos Therapeutics, Inc.

We are a biopharmaceutical company commercializing oxidized glutathione-based compounds for the treatment of cancer and hepatitis. NOV-002, our lead compound, is currently in Phase 3 development for lung cancer under a Special Protocol Assessment and Fast Track. NOV-002 is also in Phase 2 development for chemotherapy-resistant ovarian cancer and early-stage breast cancer. NOV-205, our second compound, is in Phase 1b development for chronic hepatitis C non-responders. Both compounds have completed clinical trials in humans and have been approved for use in Russia, where they were originally developed.

NOV-002, our lead compound, acts as a chemoprotectant and an immunomodulator. In May 2006, we finalized a Special Protocol Assessment (SPA) with the FDA for a single pivotal Phase 3 trial and obtained Fast Track designation in August 2006. The primary endpoint of this trial is improvement in median overall survival. We commenced patient enrollment in November 2006 and reached our enrollment target of 840 patients on March 13, 2008.

NOV-002 is also being developed to treat chemotherapy-resistant ovarian cancer. A U.S. Phase 2 trial is ongoing at Massachusetts General Hospital and Dana-Farber Cancer Institute. As of mid-2007, NOV-002 (plus chemotherapy) slowed disease progression in 60% of evaluable patients (6 out of 10 women). Further results are expected in April 2008.

NOV-002 is also being developed to treat early-stage breast cancer. These patients are often treated with chemotherapy to minimize surgical intervention. In June 2007 we commenced enrollment in a U.S. Phase 2 trial in order to evaluate the ability of NOV-002 to enhance the effectiveness of such chemotherapy while diminishing dose-limiting side-effects. Interim results are expected in mid-2008.

NOV-205, our second compound, acts as a hepatoprotective agent with immunomodulating and anti-inflammatory properties. Our Investigational New Drug Application for NOV-205 as monotherapy for chronic hepatitis C was accepted by the FDA in April 2006. A U.S. Phase 1b trial in patients who previously failed treatment with pegylated interferon plus ribavirin commenced in September 2006 and was completed in December 2007. Based on the favorable safety data obtained from this trial, we plan to initiate a longer duration proof-of-concept trial in the second half of 2008.

Our intellectual property portfolio of issued patents includes five U.S. patents, two European patents and one Japanese patent. Overall, we have filed more than thirty patent applications worldwide, with coverage including composition of matter, method of use and manufacturing. The breadth of our intellectual property will also allow us to expand our product pipeline by claiming and commercializing additional compounds that are based on oxidized glutathione.

Private Placement and Exchange of Shares

On May 2, 2007, we completed a private placement of 300 shares of our Series B Convertible Preferred Stock and five-year warrants to purchase up to 7,500,000 shares of common stock with an initial exercise price of \$1.25 per share. The shares of Series B preferred stock were convertible into an aggregate of 15,000,000 shares of common stock.

We received gross proceeds of \$15,000,000 and net proceeds of approximately \$13,700,000 (after deducting placement agents' fees and transaction costs) from this private placement.

On April 11, 2008, we completed a private placement of 113.5 shares of our Series D Convertible Preferred Stock and five year warrants to purchase up to 4,365,381 shares of our common stock with an exercise price of \$0.65. The shares of Series D preferred stock are convertible into an aggregate of 8,730,755 shares of common stock. We received gross proceeds of \$5,675,000 and net proceeds of approximately \$5,475,000 (after deducting placement agent's fees and transaction costs) from this private placement. Upon the closing of the sale of Series D preferred stock, the holders of our existing Series B preferred stock exchanged all 300 shares of their Series B preferred stock for 300 shares of Series D preferred stock. Following the exchange, no shares of Series B Preferred Stock are outstanding. The purpose of the exchange was to facilitate the reduction in conversion price of the Series B preferred stock from \$1.00 per share to \$0.65 per share.

As a result of the exchange, the common stock being offered pursuant to this prospectus, previously issuable upon conversion of the Series B preferred stock, is now issuable upon conversion of the Series D preferred stock. Any references to Series B preferred stock in the prospectus, to the extent necessary, have been revised to reference Series D preferred stock.

Certain selling stockholders are offering up to 12,000,000 shares of our common stock issuable upon conversion of 156 shares of our Series D Convertible Preferred Stock.

The Offering

Securities Offered: 12,000,000 shares of our common stock issuable upon conversion of shares of our Series D Convertible Preferred Stock

Use of Proceeds: We will not receive any of the proceeds from the sale by any selling stockholder of common stock or the conversion of preferred stock.

Total Shares of our Common Stock Outstanding as of April 11, 2008: 39,360,272

Summary Financial Information

The following table provides selected financial and operating data for the periods indicated:

	Year Ended December 31,	
	2007	2006
Revenue	\$ —	\$ —
Costs and expenses	20,294,187	8,929,808
Other income (expense)	737,052	643,752
Net loss	(19,557,135)	(8,286,056)
Net loss attributable to common stockholders	(29,721,338)	(8,547,176)
Current assets	11,059,501	11,888,674
Current liabilities	7,059,390	1,313,425
Total assets	11,107,660	11,923,359

Our principal executive offices are located at One Gateway Center, Suite 504, Newton, Massachusetts 02458 and our telephone number is (617) 244-1616.

RISK FACTORS

The following risk factors should be considered carefully in addition to the other information contained in this prospectus:

Risks Related to Our Business and Industry

The report from our independent registered public accounting firm included in our annual report on Form 10-KSB indicates that there is substantial doubt about whether we will be able to continue as a going concern for a period of one year from the date of their report.

The report from our independent registered public accounting firm included with our annual report on Form 10-KSB indicates that factors exist that raise substantial doubt about our ability to continue as a going concern for a period of one year from the date of their report. We have estimated that the cash on hand at December 31, 2007 will fund our obligations through the middle of 2008. Our ability to continue as a going concern is dependent on our ability to obtain capital (through the sale of equity and debt securities and through collaborative arrangements with partners) to fund our development activities. If we are unable to obtain additional capital through these sources, we may have to seek other sources of capital or reevaluate our operating plans, including slowing or stopping the Phase 3 clinical development of our lead drug candidate, NOV-002.

We may have difficulty raising needed capital because of our limited operating history and our business risks.

We currently generate no revenue from our proposed products or otherwise. We do not know when this will change. We have expended and will continue to expend substantial funds in the research, development and clinical and pre-clinical testing of our drug compounds. We will require additional funds to conduct research and development, establish and conduct clinical and pre-clinical trials, establish commercial-scale manufacturing arrangements and provide for the marketing and distribution of our products. Additional funds may not be available on acceptable terms, if at all. If adequate funding is not available to us, we may have to delay, reduce the scope of or eliminate one or more of our research or development programs or product launches or marketing efforts, which may materially harm our business, financial condition and results of operations.

Our long-term capital requirements are expected to depend on many factors, including:

- the number of potential products and technologies in development;
- continued progress and cost of our research and development programs;
- progress with pre-clinical studies and clinical trials;
- the time and costs involved in obtaining regulatory clearance;
- costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims;
- costs of developing sales, marketing and distribution channels and our ability to sell our drugs;
- costs involved in establishing manufacturing capabilities for clinical trial and commercial quantities of our drugs;
- competing technological and market developments;
- market acceptance of our products;
- costs for recruiting and retaining management, employees and consultants;
- costs for training physicians;

- our status as a Bulletin-Board listed company and the prospects for our stock to be listed on a national exchange; and
- uncertainty and economic instability resulting from terrorist acts and other acts of violence or war.

We may consume available resources more rapidly than currently anticipated, resulting in the need for additional funding. We may seek to raise any necessary additional funds through the issuance of warrants, equity or debt financings or executing collaborative arrangements with corporate partners or other sources, which may be dilutive to existing stockholders or otherwise have a material effect on our current or future business prospects. In addition, in the event that additional funds are obtained through arrangements with collaborative partners or other sources, we may have to relinquish economic and/or proprietary rights to some of our technologies or products under development that we would otherwise seek to develop or commercialize by ourselves. If adequate funds are not available, we may be required to significantly reduce or refocus our development efforts with regard to our drug compounds. Currently, we believe that we have available cash sufficient to meet our working capital requirements into the middle of 2008, assuming our expense levels do not exceed our current plan. If we do not generate revenues or raise additional capital, we will not be able to sustain our operations at existing levels beyond that date or earlier if expense levels increase.

The failure to complete development of our therapeutic technology, obtain government approvals, including required U.S. Food and Drug Administration (FDA) approvals, or to comply with ongoing governmental regulations could prevent, delay or limit introduction or sale of proposed products and result in failure to achieve revenues or maintain our ongoing business.

Our research and development activities and the manufacture and marketing of our intended products are subject to extensive regulation for safety, efficacy and quality by numerous government authorities in the United States and abroad. Before receiving FDA clearance to market our proposed products, we will have to demonstrate that our products are safe and effective on the patient population and for the diseases that are to be treated. Clinical trials, manufacturing and marketing of drugs are subject to the rigorous testing and approval process of the FDA and equivalent foreign regulatory authorities. The Federal Food, Drug and Cosmetic Act and other federal, state and foreign statutes and regulations govern and influence the testing, manufacturing, labeling, advertising, distribution and promotion of drugs and medical devices. As a result, clinical trials and regulatory approval can take many years to accomplish and require the expenditure of substantial financial, managerial and other resources.

In order to be commercially viable, we must successfully research, develop, obtain regulatory approval for, manufacture, introduce, market and distribute our technologies. For each drug utilizing oxidized glutathione-based compounds, including NOV-002 and NOV-205, we must successfully meet a number of critical developmental milestones including:

- demonstrating benefit from delivery of each specific drug for specific medical indications;
- demonstrating through pre-clinical and clinical trials that each drug is safe and effective; and
- demonstrating that we have established a viable Good Manufacturing Practices capable of potential scale-up.

The timeframe necessary to achieve these developmental milestones may be long and uncertain, and we may not successfully complete these milestones for any of our intended products in development.

In addition to the risks previously discussed, our technology is subject to additional developmental risks that include the following:

- uncertainties arising from the rapidly growing scientific aspects of drug therapies and potential treatments;
- uncertainties arising as a result of the broad array of alternative potential treatments related to cancer, hepatitis and other diseases; and

- anticipated expense and time believed to be associated with the development and regulatory approval of treatments for cancer, hepatitis and other diseases.

In order to conduct the clinical trials that are necessary to obtain approval by the FDA to market a product, it is necessary to receive clearance from the FDA to conduct such clinical trials. The FDA can halt clinical trials at any time for safety reasons or because we or our clinical investigators do not follow the FDA's requirements for conducting clinical trials. If we are unable to receive clearance to conduct clinical trials or the trials are halted by the FDA, we would not be able to achieve any revenue from such product, as it is illegal to sell any drug for human consumption in the U.S. without FDA approval.

Data obtained from clinical trials is susceptible to varying interpretations, which could delay, limit or prevent regulatory clearances.

Data already obtained, or in the future obtained, from pre-clinical studies and clinical trials does not necessarily predict the results that will be obtained from later pre-clinical studies and clinical trials. Moreover, pre-clinical and clinical data are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after promising results in earlier trials. The failure to adequately demonstrate the safety and effectiveness of an intended product under development could delay or prevent regulatory clearance of the potential drug, resulting in delays to commercialization, and could materially harm our business. Our clinical trials may not demonstrate sufficient levels of safety and efficacy necessary to obtain the requisite regulatory approvals for our drugs, and our proposed drugs may not be approved for marketing.

We may encounter delays or rejections based on additional government regulation from future legislation or administrative action or changes in FDA policy during the period of development, clinical trials and FDA regulatory review. We may encounter similar delays in foreign countries. Sales of our products outside the U.S. would be subject to foreign regulatory approvals that vary from country to country. The time required to obtain approvals from foreign countries may be shorter or longer than that required for FDA approval, and requirements for foreign licensing may differ from FDA requirements. We may be unable to obtain requisite approvals from the FDA and foreign regulatory authorities, and even if obtained, such approvals may not be on a timely basis, or they may not cover the uses that we request.

Even if we do ultimately receive FDA approval for any of our products, it will be subject to extensive ongoing regulation. This includes regulations governing manufacturing, labeling, packaging, testing, dispensing, prescription and procurement quotas, record keeping, reporting, handling, shipment and disposal of any such drug. Failure to obtain and maintain required registrations or comply with any applicable regulations could further delay or preclude us from developing and commercializing our drugs and subject us to enforcement action.

Our drugs or technology may not gain FDA approval in clinical trials or be effective as a therapeutic agent, which could affect our future profitability and prospects.

In order to obtain regulatory approvals, we must demonstrate that each drug is safe and effective for use in humans and functions as a therapeutic against the effects of a disease or other physiological response. To date, studies conducted in Russia involving our NOV-002 and NOV-205 products have shown what we believe to be promising results. In fact, NOV-002 has been approved for use in Russia for general medicinal use as an immunostimulant in combination with chemotherapy and antimicrobial therapy, and specifically for indications such as tuberculosis and psoriasis. NOV-205 has been approved in Russia as a monotherapy agent for the treatment of hepatitis B and C. Russian regulatory approval is not equivalent to FDA approval. Pivotal Phase 3 studies with a large number of patients, typically required for FDA approval, were not conducted for NOV-002 and NOV-205 in Russia. Further, all of our Russian clinical studies were completed prior to 2000 and may not have been conducted in accordance with current guidelines either in Russia or the United States.

A U.S.-based Phase 1/2 clinical trial of NOV-002 involving 44 non-small cell lung cancer patients provided what we believe to be a favorable outcome. As a result, we enrolled the first patient in the pivotal Phase 3 trial of NOV-002 for non-small cell lung cancer in November 2006. We reached our enrollment target in March 2008 and we expect trial conclusion mid-2009. We enrolled the first patient in the Phase 2 clinical study for NOV-002 for chemotherapy-resistant ovarian cancer in July 2006 and announced what we believe to be encouraging results from this ongoing study in June 2007. We also commenced a Phase 2 clinical study for NOV-002 for early-stage breast cancer and expect interim results in mid-2008. In December 2007, we concluded a U.S. Phase 1b clinical trial of NOV-205 for chronic hepatitis C non-responders based on favorable safety profile. There can be no assurance that we can demonstrate that these products are safe or effective in advanced clinical trials. We are also not able to give assurances that the results of the tests already conducted can be repeated or that further testing will support our applications for regulatory approval. As a result, our drug and technology research program may be curtailed, redirected or eliminated at any time.

There is no guarantee that we will ever generate substantial revenue or become profitable even if one or more of our drugs are approved for commercialization.

We expect to incur increasing operating losses over the next several years as we incur increasing costs for research and development and clinical trials. Our ability to generate revenue and achieve profitability depends on our ability, alone or with others, to complete the development of, obtain required regulatory approvals for and manufacture, market and sell our proposed products. Development is costly and requires significant investment. In addition, if we choose to license or obtain the assignment of rights to additional drugs, the license fees for such drugs may increase our costs.

To date, we have not generated any revenue from the commercial sale of our proposed products or any drugs and do not expect to receive such revenue in the near future. Our primary activity to date has been research and development. A substantial portion of the research results and observations on which we rely were performed by third parties at those parties' sole or shared cost and expense. We cannot be certain as to when or whether to anticipate commercializing and marketing our proposed products in development, and do not expect to generate sufficient revenues from proposed product sales to cover our expenses or achieve profitability in the near future.

We rely solely on research and manufacturing facilities at various universities, hospitals, contract research organizations and contract manufacturers for all of our research, development, and manufacturing, which could be materially delayed should we lose access to those facilities.

At the present time, we have no research, development or manufacturing facilities of our own. We are entirely dependent on contracting with third parties to use their facilities to conduct research, development and manufacturing. Our inability to have the facilities to conduct research, development and manufacturing may delay or impair our ability to gain FDA approval and commercialization of our drug delivery technology and products.

We currently maintain a good working relationship with our contractors. Should the situation change and we are required to relocate these activities on short notice, we do not currently have an alternate facility where we could relocate our research, development and/or manufacturing activities. The cost and time to establish or locate an alternate research, development and/or manufacturing facility to develop our technology would be substantial and would delay gaining FDA approval and commercializing our products.

We are dependent on our collaborative agreements for the development of our technologies and business development, which expose us to the risk of reliance on the viability of third parties.

In conducting our research, development and manufacturing activities, we rely and expect to continue to rely on numerous collaborative agreements with universities, hospitals, governmental agencies, charitable foundations, manufacturers and others. The loss of or failure to perform under any of these arrangements, by any of these entities, may substantially disrupt or delay our research, development and manufacturing activities including our anticipated clinical trials.

We may rely on third-party contract research organizations, service providers and suppliers to support development and clinical testing of our products. Failure of any of these contractors to provide the required services in a timely manner or on reasonable commercial terms could materially delay the development and approval of our products, increase our expenses and materially harm our business, financial condition and results of operations.

We are exposed to product, clinical and preclinical liability risks that could create a substantial financial burden should we be sued.

Our business exposes us to potential product liability and other liability risks that are inherent in the testing, manufacturing and marketing of pharmaceutical products. We cannot assure that such potential claims will not be asserted against us. In addition, the use in our clinical trials of pharmaceutical products that we may develop and then subsequently sell or our potential collaborators may develop and then subsequently sell may cause us to bear a portion of or all product liability risks. A successful liability claim or series of claims brought against us could have a material adverse effect on our business, financial condition and results of operations.

Although we have not received any product liability claims to date, we have an insurance policy of \$5,000,000 per occurrence and \$5,000,000 in the aggregate to cover such claims should they arise. There can be no assurance that material claims will not arise in the future or that our insurance will be adequate to cover all situations. Moreover, there can be no assurance that such insurance, or additional insurance, if required, will be available in the future or, if available, will be available on commercially reasonable terms. Any product liability claim, if successful, could have a material adverse effect on our business, financial condition and results of operations. Furthermore, our current and potential partners with whom we have collaborative agreements or our future licensees may not be willing to indemnify us against these types of liabilities and may not themselves be sufficiently insured or have a net worth sufficient to satisfy any product liability claims. Claims or losses in excess of any product liability insurance coverage that may be obtained by us could have a material adverse effect on our business, financial condition and results of operations.

Acceptance of our products in the marketplace is uncertain and failure to achieve market acceptance will prevent or delay our ability to generate revenues.

Our future financial performance will depend, at least in part, on the introduction and customer acceptance of our proposed products. Even if approved for marketing by the necessary regulatory authorities, our products may not achieve market acceptance. The degree of market acceptance will depend on a number of factors including:

- the receipt of regulatory clearance of marketing claims for the uses that we are developing;
- the establishment and demonstration of the advantages, safety and efficacy of our technologies;
- pricing and reimbursement policies of government and third-party payers such as insurance companies, health maintenance organizations and other health plan administrators;
- our ability to attract corporate partners, including pharmaceutical companies, to assist in commercializing our intended products; and
- our ability to market our products.

Physicians, patients, payers or the medical community in general may be unwilling to accept, utilize or recommend any of our products. If we are unable to obtain regulatory approval or commercialize and market our proposed products when planned, we may not achieve any market acceptance or generate revenue.

We may face litigation from third parties who claim that our products infringe on their intellectual property rights, particularly because there is often substantial uncertainty about the validity and breadth of medical patents.

We may be exposed to future litigation by third parties based on claims that our technologies, products or activities infringe on the intellectual property rights of others or that we have misappropriated the trade secrets of others. This risk is exacerbated by the fact that the validity and breadth of claims covered in medical technology patents and the breadth and scope of trade-secret protection involve complex legal and factual questions for which important legal principles are unresolved. Any litigation or claims against us, whether or not valid, could result in substantial costs, could place a significant strain on our financial and managerial resources and could harm our reputation. Most of our license agreements would likely require that we pay the costs associated with defending this type of litigation. In addition, intellectual property litigation or claims could force us to do one or more of the following:

- cease selling, incorporating or using any of our technologies and/or products that incorporate the challenged intellectual property, which would adversely affect our future revenue;

- obtain a license from the holder of the infringed intellectual property right, which license may be costly or may not be available on reasonable terms, if at all; or
- redesign our products, which would be costly and time-consuming.

If we are unable to adequately protect or enforce our rights to intellectual property or secure rights to third-party patents, we may lose valuable rights, experience reduced market share, assuming any, or incur costly litigation to protect such rights.

Our ability to obtain licenses to patents, maintain trade secret protection and operate without infringing the proprietary rights of others will be important to our commercializing any products under development. Therefore, any disruption in access to the technology could substantially delay the development of our technology.

The patent positions of biotechnology and pharmaceutical companies, including us, that involve licensing agreements, are frequently uncertain and involve complex legal and factual questions. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued or in subsequent legal proceedings. Consequently, our patent applications and any issued and licensed patents may not provide protection against competitive technologies or may be held invalid if challenged or circumvented. Our competitors may also independently develop products similar to ours or design around or otherwise circumvent patents issued or licensed to us. In addition, the laws of some foreign countries may not protect our proprietary rights to the same extent as U.S. law.

We also rely on trade secrets, technical know-how and continuing technological innovation to develop and maintain our competitive position. We generally require our employees, consultants, advisors and collaborators to execute appropriate confidentiality and assignment-of-inventions agreements. Our competitors may independently develop substantially equivalent proprietary information and techniques, reverse engineer our information and techniques, or otherwise gain access to our proprietary technology. We may be unable to meaningfully protect our rights in trade secrets, technical know-how and other non-patented technology.

Although our trade secrets and technical know-how are important, our continued access to the patents is a significant factor in the development and commercialization of our products. Aside from the general body of scientific knowledge from other drug delivery processes and technology, these patents, to the best of our knowledge and based on our current scientific data, are the only intellectual property necessary to develop our products, including NOV-002 and NOV-205. We do not believe that we are or will be violating any patents in developing our technology.

We may have to resort to litigation to protect our rights for certain intellectual property, or to determine their scope, validity or enforceability. Enforcing or defending our rights is expensive, could cause diversion of our resources and may not prove successful. Any failure to enforce or protect our rights could cause us to lose the ability to exclude others from using our technology to develop or sell competing products.

We have limited manufacturing experience and, if our products are approved, we may not be able to manufacture sufficient quantities at an acceptable cost, or may be subject to risk that contract manufacturers could experience shut-downs or delays.

We remain in the research and development and clinical and pre-clinical trial phase of product commercialization. Accordingly, if our products are approved for commercial sale, we will need to establish the capability to commercially manufacture our products in accordance with FDA and other regulatory requirements. We have limited experience in establishing, supervising and conducting commercial manufacturing. If we fail to adequately establish, supervise and conduct all aspects of the manufacturing processes, we may not be able to commercialize our products.

We presently plan to rely on third-party contractors to manufacture our products. This may expose us to the risk of not being able to directly oversee the production and quality of the manufacturing process. Furthermore, these contractors, whether foreign or domestic, may experience regulatory compliance difficulties, mechanical shutdowns, employee strikes or other unforeseeable acts that may delay production.

Due to our limited marketing, sales and distribution experience, we may be unsuccessful in our efforts to sell our products, enter into relationships with third parties or develop a direct sales organization.

We have not yet had to establish marketing, sales or distribution capabilities for our proposed products. Until such time as our products are further along in the regulatory process, we will not devote any meaningful time and resources to this effort. At the appropriate time, we intend to enter into agreements with third parties to sell our products or we may develop our own sales and marketing force. We may be unable to establish or maintain third-party relationships on a commercially reasonable basis, if at all. In addition, these third parties may have similar or more established relationships with our competitors.

If we do not enter into relationships with third parties for the sale and marketing of our products, we will need to develop our own sales and marketing capabilities. We have limited experience in developing, training or managing a sales force. If we choose to establish a direct sales force, we may incur substantial additional expenses in developing, training and managing such an organization. We may be unable to build a sales force on a cost-effective basis or at all. Any such direct marketing and sales efforts may prove to be unsuccessful. In addition, we will compete with many other companies that currently have extensive marketing and sales operations. Our marketing and sales efforts may be unable to compete against these other companies. We may be unable to establish a sufficient sales and marketing organization on a timely basis, if at all.

We may be unable to engage qualified distributors. Even if engaged, these distributors may:

- fail to satisfy financial or contractual obligations to us;
- fail to adequately market our products;
- cease operations with little or no notice; or
- offer, design, manufacture or promote competing products.

If we fail to develop sales, marketing and distribution channels, we would experience delays in product sales and incur increased costs, which would harm our financial results.

If we are unable to convince physicians as to the benefits of our intended products, we may incur delays or additional expense in our attempt to establish market acceptance.

Achieving broad use of our products may require physicians to be informed regarding these products and their intended benefits. The time and cost of such an educational process may be substantial. Inability to successfully carry out this physician education process may adversely affect market acceptance of our products. We may be unable to timely educate physicians regarding our intended products in sufficient numbers to achieve our marketing plans or to achieve product acceptance. Any delay in physician education may materially delay or reduce demand for our products. In addition, we may expend significant funds towards physician education before any acceptance or demand for our products is created, if at all.

Fluctuations in foreign exchange rates could increase costs to complete international clinical trial activities.

We have initiated a portion of our clinical trial activities in both Western and Eastern Europe. We anticipate that approximately 40% of the remaining Phase 3 clinical trial budget of approximately \$18 million will be incurred in Euros. Significant depreciation in the value of the U.S. Dollar against principally the Euro could adversely affect our ability to complete the trials, particularly if we are unable to redirect funding or raise additional funds. Since the timing and amount of foreign-denominated payments are uncertain and dependent on a number of factors, it is difficult to cost-effectively hedge the potential exposure. Therefore, to date, we have not entered into any foreign currency hedges to mitigate the potential exposure.

The market for our products is rapidly changing and competitive, and new therapeutics, new drugs and new treatments that may be developed by others could impair our ability to maintain and grow our business and remain competitive.

The pharmaceutical and biotechnology industries are subject to rapid and substantial technological change. Developments by others may render our technologies and intended products noncompetitive or obsolete, or we may be unable to keep pace with technological developments or other market factors. Technological competition from pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase. Most of these entities have significantly greater research and development capabilities and budgets than we do, as well as substantially more marketing, manufacturing, financial and managerial resources. These entities represent significant competition for us. Acquisitions of, or investments in, competing pharmaceutical or biotechnology companies by large corporations could increase such competitors' financial, marketing, manufacturing and other resources.

We are an early-stage enterprise that operates with limited day-to-day business management, operating as a vehicle to hold certain technology for possible future exploration, and have been and will continue to be engaged in the development of new drugs and therapeutic technologies. As a result, our resources are limited and we may experience management, operational or technical challenges inherent in such activities and novel technologies. Competitors have developed or are in the process of developing technologies that are, or in the future may be, the basis for competition. Some of these technologies may have an entirely different approach or means of accomplishing similar therapeutic effects from our technology. Our competitors may develop drugs and drug delivery technologies that are more effective than our intended products and, therefore, present a serious competitive threat to us.

The potential widespread acceptance of therapies that are alternatives to ours may limit market acceptance of our products even if commercialized. Many of our targeted diseases and conditions can also be treated by other medication or drug delivery technologies. These treatments may be widely accepted in medical communities and have a longer history of use. The established use of these competitive drugs may limit the potential for our technologies and products to receive widespread acceptance if commercialized.

If users of our products are unable to obtain adequate reimbursement from third-party payers, or if new restrictive legislation is adopted, market acceptance of our products may be limited and we may not achieve anticipated revenues.

The continuing efforts of government and insurance companies, health maintenance organizations and other payers of healthcare costs to contain or reduce costs of health care may affect our future revenues and profitability, and the future revenues and profitability of our potential customers, suppliers and collaborative partners and the availability of capital. For example, in certain foreign markets, pricing or profitability of prescription pharmaceuticals is subject to government control. In the United States, given recent federal and state government initiatives directed at lowering the total cost of health care, the U.S. Congress and state legislatures will likely continue to focus on healthcare reform, the cost of prescription pharmaceuticals and the reform of the Medicare and Medicaid systems. While we cannot predict whether any such legislative or regulatory proposals will be adopted, the announcement or adoption of such proposals could materially harm our business, financial condition and results of operations.

Our ability to commercialize our products will depend in part on the extent to which appropriate reimbursement levels for the cost of our products and related treatment are obtained by governmental authorities, private health insurers and other organizations, such as health maintenance organizations (HMO's). Third-party payers are increasingly challenging the prices charged for medical drugs and services. Also, the trend toward managed health care in the United States and the concurrent growth of organizations such as HMO's that could control or significantly influence the purchase of healthcare services and drugs, as well as legislative proposals to reform health care or reduce government insurance programs, may all result in lower prices for or rejection of our drugs. The cost containment measures that healthcare payers and providers are instituting and the effect of any healthcare reform could materially harm our ability to operate profitably.

We depend on key personnel who may terminate their employment with us at any time, and we would need to hire additional qualified personnel.

Our success will depend to a significant degree on the continued services of key management and advisors to us. There can be no assurance that these individuals will continue to provide service to us. In addition, our success will depend on our ability to attract and retain other highly skilled personnel. We may be unable to recruit such personnel on a timely basis, if at all. Our management and other employees may voluntarily terminate their employment with us at any time. The loss of services of key personnel, or the inability to attract and retain additional qualified personnel, could result in delays in development or approval of our products, loss of sales and diversion of management resources.

Compliance with changing corporate governance and public disclosure regulations may result in additional expense.

Keeping abreast of, and in compliance with, changing laws, regulations and standards relating to corporate governance, public disclosure and internal controls, including the Sarbanes-Oxley Act of 2002, new SEC regulations and, in the event we seek and are approved for listing on a registered national securities exchange, the stock exchange rules will require an increased amount of management attention and external resources. We intend to continue to invest all reasonably necessary resources to comply with evolving standards, which may result in increased general and administrative expense and a diversion of management time and attention from revenue-generating activities to compliance activities. Beginning with this annual report for the fiscal year ending December 31, 2007 we are required to include a report of our management on internal control over financial reporting. Further, in our annual report for the fiscal year ending December 31, 2009 we will be required to include an attestation report of our independent registered public accounting firm on internal control over financial reporting.

Risks Related to our Common Stock

In the time that our common stock has traded, our stock price has experienced price fluctuations.

There can be no assurance that the market price for our common stock will remain at its current level and a decrease in the market price could result in substantial losses for investors. The market price of our common stock may be significantly affected by one or more of the following factors:

- announcements or press releases relating to the bio-pharmaceutical sector or to our own business or prospects;
- regulatory, legislative, or other developments affecting us or the healthcare industry generally;
- the dilutive effect of conversion of our Series B or Series C preferred stock into common stock at conversion rates or the exercise of options and warrants at below-current-market prices;
- sales by those financing our company through convertible securities and warrants of the underlying common stock, when it is registered with the SEC and may be sold into the public market, immediately upon conversion or exercise; and
- market conditions specific to biopharmaceutical companies, the healthcare industry and the stock market generally.

There may be a limited public market for our securities; we may fail to qualify for listing on certain national securities exchanges.

In 2005 we filed applications for listing of our common stock on Archipelago and AMEX, but these applications were withdrawn primarily because our stock prices did not meet the listing requirements. Although we may reapply, there can be no assurance if and when initial listing criteria will be met or if such applications will be granted, or that the trading of our common stock will be sustained. In the event that our common stock fails to qualify for initial or continued listing on a registered stock exchange or for initial or continued inclusion in the NASDAQ system, trading, if any, in our common stock, would then continue to be conducted on the NASD's electronic bulletin board in the over-the-counter market and in what are commonly referred to as 'pink sheets'. As a result, an investor may find it difficult to dispose of or to obtain accurate quotations as to the market value of our common stock, and our common stock may be less attractive for margin loans, for investment by financial institutions, as consideration in future capital raising transactions or other purposes.

Trading of our common stock may be subject to penny-stock rules under the Securities Exchange Act of 1934. Unless exempt, for any transaction involving a penny-stock, the regulations require broker-dealers making a market in our common stock to provide risk disclosure to their customers including regarding the risks associated with our common stock, the suitability for the customer of an investment in our common stock, the duties of the broker-dealer to the customer, information regarding prices for our common stock and any compensation the broker-dealer would receive. The application of these rules may result in fewer market makers in our common stock. Our common stock is presently subject to the rules on penny-stocks, and the liquidity of our common stock could be materially adversely affected so long as we remain subject to such rule.

Our executive officers, directors and principal stockholders have substantial holdings, which could delay or prevent a change in corporate control favored by our other stockholders.

Our directors, officers and holders of our Series D preferred stock beneficially own, in the aggregate, approximately 48% of our outstanding voting shares. The interests of our current officers, directors and Series D investors may differ from the interests of other stockholders. Further, our current officers, directors and Series D investors may have the ability to significantly affect the outcome of all corporate actions requiring stockholder approval, including the following actions:

- the election of directors;
- the amendment of charter documents;
- issuance of blank-check preferred or convertible stock, notes or instruments of indebtedness which may have conversion, liquidation and similar features, or completion of other financing arrangements; or
- the approval of certain mergers and other significant corporate transactions, including a sale of substantially all of our assets, or merger with a publicly-traded shell or other company.

Our common stock could be further diluted as the result of the issuance of additional shares of common stock, convertible securities, warrants or options.

In the past, we have issued common stock, convertible securities, such as convertible preferred stock, and warrants in order to raise money. We have also issued options and warrants as compensation for services and incentive compensation for our employees and directors. We have shares of common stock reserved for issuance upon the conversion and exercise of these securities and may increase the shares reserved for these purposes in the future. Our issuance of additional common stock, convertible securities, options and warrants could affect the rights of our stockholders, and could reduce the market price of our common stock.

We are prohibited from taking certain actions and entering into certain transactions as a result of the issuance of our Series D preferred stock.

For as long as any shares of Series D Preferred Stock remain outstanding we are prohibited from taking certain actions or entering into certain transactions without the prior consent of the holders of outstanding shares of Series D preferred stock. We are prohibited from paying dividends to common stockholders, amending our certificate of incorporation, issuing any equity security or any security convertible into or exercisable for any equity security at a price of \$0.65 or less or with rights senior to the Series D Preferred Stock (except for certain exempted issuances), increasing the number of shares of Series D Preferred Stock or issuing any additional shares of Series D Preferred Stock other than the 400 shares designated in the Series D Certificate of Designations, or changing the number of our directors. We are also prohibited from entering into certain transactions such as selling or otherwise disposing of all or substantially all of our assets or intellectual property or entering into a merger or consolidation with another company unless we are the surviving corporation, the Series D Preferred Stock remains outstanding and there are no changes to the rights and preferences of the Series D Preferred Stock, redeeming or repurchasing any capital stock other than Series D Preferred Stock, or incurring any new debt for borrowed money in excess of \$500,000.

If the board of directors determines that any of these actions are in the best interest of the Company or our shareholders, we may be unable to complete them if we do not get the approval of the holders of the outstanding shares of Series D preferred stock.

FORWARD-LOOKING STATEMENTS

Except for historical facts, the statements in this prospectus are forward-looking statements. Forward-looking statements are merely our current predictions of future events. These statements are inherently uncertain, and actual events could differ materially from our predictions. Important factors that could cause actual events to vary from our predictions include those discussed under the headings “Risk Factors,” “Management’s Discussion and Analysis or Plan of Operation” and “Business.” We assume no obligation to update our forward-looking statements to reflect new information or developments. We urge readers to review carefully the risk factors described in this prospectus and the other documents that we file with the Securities and Exchange Commission. You can read these documents at www.sec.gov.

WE UNDERTAKE NO OBLIGATION TO PUBLICLY UPDATE OR REVISE ANY FORWARD-LOOKING STATEMENTS WHETHER AS A RESULT OF NEW INFORMATION, NEW EVENTS OR ANY OTHER REASON, OR REFLECT ANY EVENTS OR CIRCUMSTANCES AFTER THE DATE OF THIS PROSPECTUS OR THE DATE OF ANY APPLICABLE PROSPECTUS SUPPLEMENT THAT INCLUDES FORWARD-LOOKING STATEMENTS.

USE OF PROCEEDS

The selling stockholders will receive all of the proceeds from the sale of the shares offered for sale by them under this prospectus. We will not receive any proceeds from the resale of shares by the selling stockholders covered by this prospectus.

MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information

Our common stock has been quoted on the OTC Electronic Bulletin Board of The National Association of Securities Dealers, Inc. under the symbol "NVL.T.OB" since June 14, 2005. The following table provides, for the periods indicated, the high and low bid prices for our common stock. These over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission, and may not represent actual transactions.

Fiscal Year 2006	High	Low
First Quarter	\$ 2.25	\$ 1.60
Second Quarter	\$ 1.95	\$ 0.85
Third Quarter	\$ 1.05	\$ 0.63
Fourth Quarter	\$ 1.02	\$ 0.60
Fiscal Year 2007	High	Low
First Quarter	\$ 1.24	\$ 0.85
Second Quarter	\$ 1.40	\$ 0.82
Third Quarter	\$ 0.90	\$ 0.45
Fourth Quarter	\$ 0.67	\$ 0.43
Fiscal Year 2008	High	Low
First Quarter	\$ 0.82	\$ 0.43
Second Quarter (through April 14, 2008)	\$ 0.64	\$ 0.44

On April 14, 2008 there were 116 holders of record of our common stock. This number does not include stockholders for whom shares were held in a "nominee" or "street" name.

We have not declared or paid any cash dividends on our common stock and do not anticipate declaring or paying any cash dividends in the foreseeable future. We are prohibited from paying any dividends on common stock as long as any shares of our Series D preferred stock are outstanding. We currently expect to retain future earnings, if any, for the development of our business.

Our transfer agent and registrar is American Stock Transfer and Trust Company, 59 Maiden Lane, New York, NY 10038.

MANAGEMENT'S DISCUSSION AND ANALYSIS OR PLAN OF OPERATION

Overview

We are a biopharmaceutical company, established in 1996, commercializing oxidized glutathione-based compounds for the treatment of cancer and hepatitis.

NOV-002, our lead compound currently in Phase 3 development for non-small cell lung cancer (NSCLC), acts as a chemoprotectant and an immunomodulator. In May 2006, we finalized a Special Protocol Assessment (SPA) with the FDA for a single pivotal Phase 3 trial in advanced NSCLC in combination with first-line chemotherapy, and received Fast Track designation in August 2006. The primary endpoint of this trial is improvement in median overall survival. Patient enrollment commenced in November 2006 and targeted enrollment was reached on March 13, 2008. NOV-002 is also in Phase 2 development for chemotherapy-resistant ovarian cancer and early-stage breast cancer.

NOV-205, our second compound, acts as a hepatoprotective agent with immunomodulating and anti-inflammatory properties. Our Investigational New Drug Application for NOV-205 as monotherapy for chronic hepatitis C has been accepted by the FDA. A U.S. Phase 1b clinical trial in patients who previously failed treatment with pegylated interferon plus ribavirin was completed in December 2007. Based on favorable safety results of that trial, we plan to initiate a longer duration proof-of-concept trial in the second half of 2008.

Both compounds have completed clinical trials in humans and have been approved for use in Russia where they were originally developed. We own all intellectual property rights worldwide (excluding Russia and other states of the former Soviet Union) related to compounds based on oxidized glutathione, including NOV-002 and NOV-205. Our patent portfolio includes five U.S. issued patents, two European issued patents and one Japanese issued patent.

Plan of Operation

Our plan of operation for the next twelve months is to continue the clinical development of our two product candidates. We expect our principal expenditures during those 12 months to include the costs associated with clinical trials. We will continue to maintain a low number of permanent employees and utilize senior advisors, consultants, contract research and manufacturing organizations and third parties to perform certain aspects of product development, including clinical and non-clinical development, manufacturing and, in some cases, regulatory and quality assurance functions. Based on our current and anticipated spending, we anticipate that we will be able to fund these activities with existing working capital into mid-2008. We plan to seek additional capital in the first half of 2008. We also plan to evaluate out-license opportunities for NOV-002 in Europe and/or Japan and use resources from these potential arrangements to offset, in part, the expense of our development. If we are unable to obtain funding on a timely basis, we may be required to significantly curtail or terminate one or more of our research or development programs or take other steps that could significantly impact the execution of our strategy.

Capital Structure and Financings

In 2005 following the settlement of certain of our indebtedness, we completed a two-step reverse merger with Common Horizons, Inc. ("Common Horizons"), a Nevada-based developer of web portals, and its wholly-owned subsidiary Nove Acquisition, Inc. After the completion of the reverse merger Novelos became the surviving corporation, the business of Common Horizons, which was insignificant, was abandoned and the business of Novelos was adopted. The transaction was therefore treated as a reverse acquisition recapitalization with Novelos as the acquiring party and Common Horizons as the acquired party for accounting purposes.

During 2005, 2006 and 2007 we completed various private placements of securities. In May through August of 2005 we sold an aggregate of 4,000,000 shares of common stock and warrants to purchase 2,000,000 shares of common stock for net cash proceeds of \$3,715,000 and the conversion of \$550,000 of convertible debt and accrued interest. In September and October 2005, we sold in a private placement 3,200 shares of Series A preferred stock and warrants to purchase 969,696 shares of common stock for aggregate net proceeds of \$2,864,000. On March 7, 2006, we sold 11,154,073 shares of our common stock and warrants to purchase 8,365,542 shares of our common stock for net proceeds of \$13,847,000. On May 2, 2007, we sold 300 shares of our Series B preferred stock and warrants to purchase 7,500,000 shares of our common stock for net proceeds of \$13,693,000. In connection with that financing, the holders of the existing Series A preferred stock exchanged their 3,264 shares of Series A preferred stock for 272 shares of a new Series C convertible preferred stock, which are convertible into 3,264,000 shares of common stock. On April 11, 2008, we sold 113.5 shares of our Series D preferred stock and warrants to purchase 4,365,381 shares of common stock for estimated net proceeds of \$5,475,000 (net of issuance costs). The shares of Series D preferred stock sold in the financing are convertible into 8,730,755 shares of common stock. In connection with that financing, the holders of the existing Series B preferred stock exchanged their 300 shares of Series B preferred stock for 300 shares of Series D preferred stock, which are convertible into 23,076,900 shares of common stock.

Results of Operations

Research and development expense. Research and development expense consists of costs incurred in identifying, developing and testing product candidates, which primarily consist of salaries and related expenses for personnel, fees paid to professional service providers for independent monitoring and analysis of our clinical trials, costs of contract research and manufacturing and costs to secure intellectual property. We are currently developing two proprietary compounds, NOV-002 and NOV-205. To date, most of our research and development costs have been associated with our NOV-002 compound.

General and administrative expense. General and administrative expense consists primarily of salaries and other related costs for personnel in executive, finance and administrative functions. Other costs include facility costs, insurance, costs for public and investor relations, directors' fees and professional fees for legal and accounting services.

Years Ended December 31, 2007 and 2006

Research and Development. Research and development expense for the year ended December 31, 2007 was \$17,428,000 compared to \$6,441,000 for the year ended December 31, 2006. The \$10,987,000, or 171%, increase in research and development expense was due to increased funding of our clinical, contract manufacturing and non-clinical activities. The overall increase resulted principally from expanded activities relating to our pivotal Phase 3 clinical trial of NOV-002 for non-small cell lung cancer. The increase includes \$4,712,000 in additional contract research and consulting services, an increase of \$3,310,000 in clinical investigator expenses, an increase of \$669,000 in drug manufacturing and distribution costs (including storage and shipping chemotherapy drug) and an increase of \$217,000 related to salaries and overhead costs such as travel and related expenses. We also purchased \$3,392,000 of chemotherapy drugs during 2007 (an increase of \$2,101,000 over 2006) to be used in the Phase 3 clinical trial, specifically for clinical sites in Eastern and Western Europe. Since we do not anticipate recovering any of the costs of the chemotherapy and we not have a reliable method for tracking the drugs that have been administered to patients or evaluating any losses associated with spoilage, we recorded the entire amount as an expense in the period purchased. As disclosed in Note 9, we have a commitment to purchase an additional \$1,000,000 of chemotherapy drugs. The commitment was fulfilled during January 2008. The increases discussed above were offset by a decrease of \$22,000 in stock compensation expense during 2007 as compared to 2006.

General and Administrative. General and administrative expense for the year ended December 31, 2007 was \$2,866,000 compared to \$2,488,000 for the year ended December 31, 2006. The \$378,000, or 15%, increase in general and administrative expense was due to four factors. First, we recorded \$396,000 in potential liquidated damages associated with the registration of less than 100% of the securities required by the registration rights agreements with investors in our Series B Preferred Stock. This represents a \$421,000 increase over 2006, which included a credit of \$25,000 for potential liquidated damages associated with a previous financing. Second, compensation and related costs and fees to directors increased \$160,000 as a result of the hiring of a full-time director of finance in mid-2006, salary increases to administrative personnel, and increases in director fees. Third, overhead costs increased \$96,000 due principally to increases in insurance and travel costs. Lastly, stock compensation associated with stock options increased by \$81,000 due to new option grants during late 2006 and early 2007 to employees, directors and consultants. These increases were offset by a decrease of \$380,000 in professional and consulting costs associated with legal, accounting and investor-relations professional services as we increased our use of internal resources to perform those functions. Also, during 2006 we issued restricted stock to certain investor relations firms. There were no restricted stock issuances during 2007.

Interest Income. Interest income for the year ended December 31, 2007 was \$730,000 compared to \$638,000 for the year ended December 31, 2006. The increase in interest income during 2007 related to higher average cash balances in 2007 as a result of the net proceeds received from 2006 and 2007 financing transactions.

Preferred Stock Dividends and Deemed Dividends. During the year ended December 31, 2007 we paid cash dividends to Series A and C preferred stockholders of \$261,000 and dividends of \$563,000 to Series B preferred stockholders. An additional \$337,000 of dividends were declared and accrued but not paid to Series B preferred stockholders. During the year ended December 31, 2007 we also recorded deemed dividends to preferred stockholders totaling \$9,003,000 (including a payment of \$40,000 made upon the exchange of Series A for Series C preferred shares). This amount represents the value attributed to the beneficial conversion feature of the Series B convertible preferred stock of \$7,824,000 and the fair value of warrants and cash of \$1,179,000 transferred to the former Series A preferred stockholders in connection with the exchange of their shares for shares of Series C preferred stock that were subordinated to the Series B shares. The deemed dividends and cash dividends have been included in the calculation of net loss attributable to common stockholders of \$29,721,000, or \$0.76 per share, for the year ended December 31, 2007. The deemed dividends and cash dividends are excluded from our net loss (from operating activities) of \$19,557,000 or \$0.50 per share, for the year ended December 31, 2007. There were no deemed dividends recorded during 2006; however we paid cash dividends totaling \$261,000 to Series A preferred stockholders.

Liquidity and Capital Resources

We have financed our operations since inception through the sale of securities and the issuance of debt (which was subsequently paid off or converted into equity). As of December 31, 2007, we had \$10,926,000 in cash and equivalents, including \$1,185,000 of restricted cash that is reserved for research and development activities.

During the year ended December 31, 2007, cash of approximately \$13,468,000 was used in operations, primarily due to a net loss of \$19,557,000. The cash impact of the loss was offset by non-cash stock-based compensation expense of \$503,000, depreciation and amortization of \$15,000, a decrease in prepaid expenses of \$162,000, an increase in accrued compensation of \$124,000 and an increase in accounts payable and accrued liabilities of \$5,285,000. The significant increase in accounts payable and accrued liabilities is principally a result of greater than expected delays in invoicing from clinical research organizations. During the year ended December 31, 2007, cash of approximately \$442,000 was provided by investing activities resulting from the release of restrictions on \$470,000 of cash that had been previously restricted, offset by payments of \$24,000 to purchase fixed assets and \$4,000 for a lease deposit.

During the year ended December 31, 2007, cash of approximately \$12,830,000 was provided by financing activities as a result of the net proceeds of \$13,693,000 from the sale of our Series B preferred stock. This was offset by the payment of cash dividends on the Series A, B and C convertible preferred stock totaling \$824,000 and a \$40,000 payment made in connection with the exchange of Series A preferred shares for Series C preferred shares.

On April 11, 2008, pursuant to a securities purchase agreement signed March 26, 2008, as amended April 9, 2008, we sold 113.5 shares of a newly created series of our preferred stock, designated "Series D Convertible Preferred Stock", par value \$0.00001 per share (the "Series D Preferred Stock") and issued warrants to purchase 4,365,381 shares of our common stock for an aggregate purchase price of \$5,675,000 (the "Series D Financing").

Based on our current and anticipated spending, we believe that our available cash and equivalents, including the net proceeds from the Series D financing, will fund our operations into late 2008. We will need to raise additional capital in order to complete the pivotal Phase 3 clinical trial for NOV-002 in NSCLC and other research and development activities. We plan to seek additional funding through collaborative arrangements and public or private financings. Our ability to continue as a going concern is dependent on our ability to obtain such funding. Additional funding may not be available to us on acceptable terms or at all. In addition, the terms of any financing may adversely affect the holdings or the rights of our stockholders. For example, if we raise additional funds by issuing equity securities, further dilution to our existing stockholders may result. If we are unable to obtain funding on a timely basis, we may be required to significantly curtail one or more of our research or development programs. We also could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies, product candidates, or products which we would otherwise pursue on our own.

Even if we are able to raise additional funds in a timely manner, our future capital requirements may vary from what we expect and will depend on many factors, including the following:

- the resources required to successfully complete our clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- continued progress in our research and development programs, as well as the magnitude of these programs;
- the cost of manufacturing activities;
- the costs involved in preparing, filing, prosecuting, maintaining, and enforcing patent claims;
- the timing, receipt, and amount of milestone and other payments, if any, from collaborators; and
- fluctuations in foreign exchange rates.

Critical Accounting Policies

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States (GAAP) requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements, as well as the reported amounts of revenues and expenses during the periods presented. Actual results could differ from those estimates. We review these estimates and assumptions periodically and reflect the effects of revisions in the period that they are determined to be necessary.

We believe that the following accounting policies reflect our more significant judgments and estimates used in the preparation of our financial statements.

Accrued Liabilities. As part of the process of preparing financial statements, we are required to estimate accrued liabilities. This process involves identifying services that have been performed on our behalf, and estimating the level of service performed and the associated cost incurred for such service as of each balance sheet date in our financial statements. Examples of estimated expenses for which we accrue include: contract service fees such as amounts paid to clinical research organizations and investigators in conjunction with clinical trials; fees paid to contract manufacturers in conjunction with the production of clinical materials; and professional service fees, such as for lawyers and accountants. In connection with such service fees, our estimates are most affected by our understanding of the status and timing of services provided relative to the actual levels of services incurred by such service providers. The majority of our service providers invoice us monthly in arrears for services performed. In the event that we do not identify certain costs that have begun to be incurred, or we over- or underestimate the level of services performed or the costs of such services, our reported expenses for such period would be too high or too low. The date on which certain services commence, the level of services performed on or before a given date and the cost of such services are often determined based on subjective judgments. We make these judgments based on the facts and circumstances known to us in accordance with generally accepted accounting principles.

Stock-based Compensation. Commencing on January 1, 2006 we began applying the provisions of Statement of Financial Accounting Standards (SFAS) 123R, *Share-Based Payment*, or SFAS 123R, in accounting for stock-based compensation. SFAS 123R requires measurement of the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award. That cost is recognized over the period during which an employee is required to provide service in exchange for the award, the requisite service period (usually the vesting period). Prior to January 1, 2006, we followed Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees*, or APB 25, and related interpretations, in accounting for our stock-based compensation plans, rather than the alternative fair-value method provided for under SFAS No. 123, *Accounting for Stock-Based Compensation*, or SFAS 123. We account for transactions in which services are received from non-employees in exchange for equity instruments based on the fair value of such services received or of the equity instruments issued, whichever is more reliably measured, in accordance with SFAS 123 and the Emerging Issues Task Force (EITF) Issue 96-18, *Accounting for Equity Instruments That Are Issued to Other than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*, or EITF 96-18.

Accounting for equity instruments granted or sold by us under SFAS 123, SFAS 123R and EITF 96-18 requires fair-value estimates of the equity instrument granted or sold. If our estimates of the fair value of these equity instruments are too high or too low, our expenses may be over- or understated. For equity instruments granted or sold in exchange for the receipt of goods or services, we estimate the fair value of the equity instruments based on consideration of factors that we deem to be relevant at that time.

BUSINESS

We were incorporated in June 1996 as AVAM International, Inc. In October 1998, Novelos Therapeutics, Inc., a newly incorporated entity, merged into AVAM, and the name of AVAM was changed to Novelos Therapeutics, Inc. In 2005, we completed a two-step reverse merger with Common Horizons, Inc., and its wholly-owned subsidiary Nove Acquisition, Inc. Following the merger, the surviving company was Novelos Therapeutics, Inc.

We are a biopharmaceutical company commercializing oxidized glutathione-based compounds for the treatment of cancer and hepatitis. NOV-002, our lead compound, is currently in Phase 3 development for lung cancer under a Special Protocol Assessment and Fast Track. NOV-002 is also in Phase 2 development for chemotherapy-resistant ovarian cancer and early-stage breast cancer. NOV-205, our second compound, is in Phase 1b development for chronic hepatitis C non-responders. Both compounds have completed clinical trials in humans and have been approved for use in Russia, where they were originally developed.

NOV-002, our lead compound, acts as a chemoprotectant and an immunomodulator. In May 2006, we finalized a Special Protocol Assessment (SPA) with the FDA for a single pivotal Phase 3 trial and obtained Fast Track designation in August 2006. The primary endpoint of this trial is improvement in median overall survival. We commenced patient enrollment in November 2006 and reached our enrollment target of 840 patients on March 13, 2008.

NOV-002 is also being developed to treat chemotherapy-resistant ovarian cancer. A U.S. Phase 2 trial is ongoing at Massachusetts General Hospital and Dana-Farber Cancer Institute. As of April 2008, NOV-002 (plus chemotherapy) slowed disease progression in 60% of evaluable patients (9 out of 15 women). We plan to initiate a second phase 2 trial in platinum-resistant ovarian cancer patients in early 2009.

NOV-002 is also being developed to treat early-stage breast cancer. These patients are often treated with chemotherapy to minimize surgical intervention. In June 2007 we commenced enrollment in a U.S. Phase 2 trial in order to evaluate the ability of NOV-002 to enhance the effectiveness of such chemotherapy while diminishing dose-limiting side-effects. Interim results are expected in mid-2008.

NOV-205, our second compound, acts as a hepatoprotective agent with immunomodulating and anti-inflammatory properties. Our Investigational New Drug Application for NOV-205 as monotherapy for chronic hepatitis C was accepted by the FDA in April 2006. A U.S. Phase 1b trial in patients who previously failed treatment with pegylated interferon plus ribavirin commenced in September 2006 and was completed in December 2007. Based on the favorable safety data obtained from this trial, we plan to initiate a longer duration proof-of-concept trial in the second half of 2008.

Our intellectual property portfolio of issued patents includes five U.S. patents, two European patents and one Japanese patent. Overall, we have filed more than thirty patent applications worldwide, with coverage including composition of matter, method of use and manufacturing. The breadth of our intellectual property will also allow us to expand our product pipeline by claiming and commercializing additional compounds that are based on oxidized glutathione.

Business Strategy

Our primary objective is to fully exploit our proprietary scientific and intellectual property portfolio in oxidized glutathione-based therapeutics. NOV-002, currently in Phase 3 development in the U.S. and Europe, has demonstrated an excellent safety and efficacy profile in Russia as a combination treatment with chemotherapy for a number of different cancers. The Russian data is particularly compelling in non-small cell lung cancer and platinum-resistant ovarian cancer, indications with large and growing unmet medical needs. In a 1996-1998 Russian non-small cell lung cancer trial, NOV-002 increased the one-year survival rate from 17% to 63% when used in combination with chemotherapy. This result represents an 80% improvement over the U.S. survival rate of 35% that results from the current standard of care. Positive results in a controlled U.S.-based Phase 1/2 non-small cell lung cancer study completed in August 2005 reinforced the positive results obtained in earlier Russian clinical studies.

We intend to obtain a U.S. marketing partner for NOV-002 after the non-small cell lung cancer Phase 3 clinical trial results are available (expected mid-2009). In the nearer term, we plan to out-license NOV-002 in Europe and/or Japan and use resources from these potential arrangements to offset, in part, the expense of our development. In December 2007, we entered into a collaboration agreement with Lee's Pharmaceutical (HK) Ltd (which is 30% owned by Sigma-Tau Group) to develop, manufacture and commercialize NOV-002 for cancer and NOV-205 for hepatitis in Hong Kong, Macau, China and Taiwan.

In Russian clinical studies, NOV-205 has demonstrated the ability to substantially decrease the serum viral load of patients with either hepatitis B or C as well as to restore normal liver function as evidenced by blood biochemical markers. In the U.S., both hepatitis B and C are relatively large markets, but hepatitis B is reasonably well served. Therefore, we will concentrate clinical development efforts on chronic hepatitis C, which should represent a more direct path to regulatory approval as well as providing patients with an improved therapy regimen. In December 2007, based on a favorable safety profile, we concluded a U.S. Phase 1b clinical trial in chronic hepatitis C non-responders. We plan to commence a proof-of-concept trial in the second half of 2008 and will explore out-license opportunities for NOV-205 after completion of this trial.

Technology Overview

Glutathione is a naturally occurring substance present in nearly all cells of the body. The glutathione pathway consists of oxidized glutathione, the primary component of NOV-002 and NOV-205, and associated metabolic enzymes. It is considered to be the most important cellular system for protection against the toxic effects of a variety of cell-damaging molecules. More recently, it has become evident that in addition to this cell protective role, a key function of the glutathione system is to dynamically regulate cell function by reversibly altering the structure of proteins via a process termed glutathionylation. The resulting activation/inhibition of protein function is analogous to the much-studied role of protein phosphorylation as a cellular regulatory mechanism.

Protein S-glutathionylation attendant to cellular redox changes at the cell surface and intracellularly are known to affect a variety of critical cell functions including:

- Cell signaling pathways
- Cytoskeletal structure/function
- Protein folding/stability
- Calcium homeostasis
- Energy metabolism
- Redox homeostasis

In addition, changes in the ratio of reduced to oxidized forms of glutathione (GSH/GSSG) can modulate protein phosphorylation in signal pathways, further amplifying the impact of redox changes on cell function. Examples of redox-sensitive gene expression include regulation of gene transcription factors such as NFkB and AP-1, which have been shown to have pivotal roles in the regulation of many genes involved in immune and inflammatory responses, including cytokines and growth factors. The activities of other immune/inflammation regulatory proteins are also sensitive to GSH/GSSG (e.g., mitogen-activated protein kinases, MAPKs) as are elements of the cytoskeleton (e.g., actin) that control interaction and communication between the cells and their surrounding environment (e.g., extracellular matrix) and cell surface proteins (e.g., protein disulfide isomerase, PDI) which have been implicated in the modulation of tumor cell invasiveness and metastasis.

Importantly, it has been shown that oxidized glutathione itself is capable of causing protein glutathionylation leading to changes in cell signaling pathway function. Thus, GSSG, or NOV-002, added to cells can result in a rapid, transient alteration of cell surface or intracellular redox state by shifting the equilibrium towards the formation of mixed disulfides with protein thiols. This is accompanied by glutathionylation of cellular proteins and alterations in phosphorylation of signaling proteins (e.g., MAPKs, AKT, JAK2, STAT5).

Findings with NOV-002 and NOV-205 in animals and humans are consistent with a variety of known effects of modulating cellular redox status (e.g., blood precursor cell proliferation (hematopoiesis), modulation of cytokine and growth factor production - including those known to control production of blood cells, immune system modulation, cytoskeletal alterations that may impact the migration and invasiveness of tumor cells. Identification of the precise molecular targets of the GSSG component of NOV-002 and NOV-205, which account for their clinical effects, is the subject of ongoing study.

Products in Development

Our current developmental pipeline of drugs is based on oxidized glutathione, a natural metabolite, that has shown excellent safety as well as clinical efficacy in numerous cancers, hepatitis B and C, HIV, psoriasis, tuberculosis and certain other diseases. The lead products are believed to act via modulation of critical regulatory molecules that mediate immune function, tumor progression (in combination with chemotherapy), and drug detoxification.

NOV-002

NOV-002 is an injectable, small-molecule formulation of a natural metabolite that is being developed to be used in combination with chemotherapy for treatment of lung, ovarian and breast cancer.

NOV-002 for Non-Small Cell Lung Cancer

In the U.S., NOV-002 is in Phase 3 development for non-small cell lung cancer under a Special Protocol Assessment with Fast Track designation. NOV-002 is approved in Russia for general medicinal usage as an immunostimulant in combination with chemotherapy and antimicrobial therapy, and specifically for indications such as tuberculosis and psoriasis. Efficacy and excellent safety have been demonstrated in trials with 340 patients in Russia across numerous types of cancer including: non-small cell lung cancer, breast cancer, ovarian cancer, colorectal cancer and pancreatic cancer. Since the Russian Ministry of Health approval in 1998, it is estimated that NOV-002 has been administered to over 10,000 patients.

According to the American Cancer Society, about 1.44 million U.S. men and women were expected to be diagnosed with cancer in 2007. Over 550,000 U.S. cancer patients were expected to die in 2007, which makes cancer the second leading cause of death in the U.S., exceeded only by deaths related to heart disease. Lung cancer is the leading cause of cancer death in the U.S. Approximately 213,000 people were expected to be diagnosed with lung cancer in 2007, with over 160,000 deaths. According to a Rodman and Renshaw report dated December 2006, there are approximately 405,000 cases of lung cancer among industrial nations and the pharmaceutical market for treating lung cancer is currently approximately \$800 million per year in the U.S. and \$1.8 billion worldwide, expected to grow to greater than \$8 billion by 2011. Non-small cell lung cancer accounts for more than 80% of lung cancer. Only about 15% of non-small cell lung cancer patients are diagnosed early enough to be eligible for surgery.

Platinum-based chemotherapy regimens are standard first-line treatment for advanced non-small cell lung cancer patients, since these patients are not eligible for surgery. Carboplatin and paclitaxel are the most common combination therapy in the U.S., while cisplatin and gemcitabine are more common in Europe. During treatment, patients continue to be subject to serious adverse effects. According to December 2003 Credit Suisse First Boston and UBS reports and Phase 3 clinical trials conducted as recently as 2005, the one-year survival rate for first-line therapy is typically only about 35%, median survival is approximately 8.5 months and the objective tumor response rate is about 20%. Overall, fewer than 5% of advanced non-small cell lung cancer patients survive five years. Docetaxel is approved for use as second-line treatment of non-small cell lung cancer. New dosing regimens with existing cytotoxic drugs are likely to provide only incremental improvements in efficacy and/or safety, and are very expensive. Similarly, emerging targeted biologic therapies, such as Astra Zeneca's IRESSA®, OSI's TARCEVA®, Genentech's AVASTIN® and ImClone's ERBITUX®, may offer some benefit for certain patient subpopulations, but overall efficacy has remained low. Moreover, there are significant safety concerns and the costs to manufacture are very high. Thus, there is an absence of effective treatments for non-small cell lung cancer, particularly for late stage patients.

NOV-002 can be distinguished from other drugs for non-small cell lung cancer on the market or in development because, based on available data, NOV-002 possesses the key attributes of safety, improved recovery from chemotherapy toxicity, potentiation of chemotherapy (increased survival rates and better anti-tumor effects) and low cost of manufacture. In a controlled randomized U.S. Phase 1/2 clinical trial, advanced NSCLC patients treated with NOV-002 in combination with paclitaxel and carboplatin demonstrated improved objective tumor response (69% of the patients treated with NOV-002 plus chemotherapy had 50% or greater tumor shrinkage versus only 33% of the patients treated with chemotherapy alone) and higher tolerance of chemotherapy versus the control group. In a controlled randomized Russian trial, when used in combination with cisplatin-based chemotherapy, NOV-002 increased the one-year survival of advanced non-small cell lung cancer patients from 17% to 63% (versus 35% typical in the U.S.). On the basis of U.S. and Russian data, we expect that NOV-002 will be used in combination with first-line chemotherapy treatments and may be complementary to second-line and recently emerging third-line products. Furthermore, we expect that NOV-002 may have utility in all stages of non-small cell lung cancer and in other solid tumor types as well.

The Russian non-clinical and clinical data set (including clinical safety and efficacy, extensive animal toxicology studies and a comprehensive chemistry and manufacturing package) was accepted by the FDA as the basis of an Investigational New Drug (IND) application, leading to a Novelos-sponsored Phase 1/2 clinical trial in advanced non-small cell lung cancer in late 1999. The aim of the Phase 1/2 clinical study was to demonstrate safety, detect trends towards efficacy, compare routes of administration and support initiation of a Phase 3 study. We finalized a Special Protocol Assessment with the FDA in May 2006 for a single pivotal Phase 3 trial in advanced non-small cell lung cancer in combination with first-line chemotherapy, and obtained Fast Track designation in August 2006. The primary endpoint of this trial is improvement in median overall survival and we reached our enrollment target of 840 patients in March 2008. We expect the pivotal Phase 3 trial to conclude in mid-2009.

In the U.S. Phase 1/2 non-small cell lung cancer clinical trial of NOV-002, 44 chemotherapy-naïve late-stage lung cancer patients (patients who had not received prior chemotherapy) were randomized to one of three groups for six months of treatment:

- Group A: NOV-002, administered intravenously and intramuscularly, in combination with cytotoxic chemotherapy (carboplatin + paclitaxel).
- Group B: NOV-002, administered intravenously and subcutaneously, in combination with cytotoxic chemotherapy.
- Group C: Cytotoxic chemotherapy alone was administered to this control group.

Based on the study protocol, the intent-to-treat analysis of the best overall objective tumor response (e.g., complete or partial tumor shrinkage) showed that eleven out of sixteen (69%) NOV-002-treated patients in Group B demonstrated greater than 50% tumor shrinkage versus only five out of fifteen (33%) in the control group (C). Six out of thirteen (46%) patients in Group A demonstrated an objective response. The difference between groups B and C was statistically significant ($p=0.044$).

Further, NOV-002-treated patients better tolerated cytotoxic chemotherapy as evidenced by their ability to receive more cycles of chemotherapy compared to the control group (C). 100% of patients in Group B and 85% in Group A were able to complete four cycles of chemotherapy, while only 50% of control group patients (C) were able to do so. The differences between groups was statistically significant ($p=0.004$).

In St. Petersburg, Russia, a multi-center, randomized, open-label study was conducted more than ten years ago to evaluate the safety and efficacy of NOV-002 in patients with advanced non-small cell lung cancer. NOV-002, used in combination with chemotherapy, dramatically and significantly increased the one-year survival rate (63% treated group vs. 17% control, $p<0.05$). NOV-002 significantly improved patients' ability to conduct daily activities and quality of life, increased tolerance to chemotherapy, improved hematologic parameters and improved or normalized kidney/liver toxicity markers. As in the U.S. Phase 1/2 trial, patients receiving NOV-002 were able to receive significantly more cycles of chemotherapy. Importantly, no NOV-002-associated adverse effects were observed. In addition, in an independent study in advanced non-small cell lung cancer study of similar design in Moscow in 2000, 52% of the patients treated with NOV-002 survived for at least one year.

NOV-002 for Chemotherapy (Platinum)-Resistant Ovarian Cancer

According to the American Cancer Society, approximately 22,000 U.S. women were expected to be diagnosed with ovarian cancer in 2007 and 15,000 women are expected to die from it. According to a Rodman and Renshaw report dated December 2006, the pharmaceutical market for treating ovarian cancer is estimated to be \$300 million per year. There is a lack of effective treatment, particularly in the case of patients who are chemotherapy refractory (those who do not respond to chemotherapy) or resistant (those who relapse shortly after receiving chemotherapy).

First-line chemotherapy treatment is the same in ovarian cancer as in non-small cell lung cancer. Standard first-line treatment for ovarian cancer patients is carboplatin and paclitaxel chemotherapy in combination. Doxorubicin and topotecan alternate as second- and third-line chemotherapy treatments.

Refractory/resistant ovarian cancer patients have a very poor prognosis because they are faced with inadequate therapeutic options. According to a Lehman Brothers report dated September 2002, response rates from second-line treatments, such as doxorubicin and topotecan, are typically less than 12%. Once a woman's ovarian cancer is defined as platinum resistant, the chance of having a partial or complete response to further platinum therapy is typically less than 10%, according to an article by A. Berkenblit in the June 2005 issue of the *Journal of Reproductive Medicine*.

In Russia in 1998, twenty ovarian cancer case studies were analyzed. All of these patients were treated for three cycles with platinum-based chemotherapy but continued with progressive disease according to qualitative assessments and Cancer Antigen 125. The patients were then treated with NOV-002 for three to four weeks, followed by three more cycles of the same platinum-based chemotherapy (which they previously failed to respond to) in conjunction with NOV-002. The observed 40% objective response rate across these case studies is much higher than would be expected in such patients. Objective response is defined as partial (50% or greater tumor reduction) or complete response; it does not include stabilization of the disease or small reductions in tumor size. An additional 40% of patients in the Russian analysis displayed stable disease.

In the U.S., a Phase 2 trial in chemotherapy-resistant ovarian cancer patients commenced in July 2006 and is ongoing at Massachusetts General Hospital and Dana-Farber Cancer Institute. To date, NOV-002 (plus chemotherapy) slowed disease progression in 60% of evaluable patients (9 out of 15 patients). We plan to initiate a second phase trial in chemotherapy-resistant ovarian cancer patients in early 2009.

NOV-002 for Neoadjuvant Treatment of Breast Cancer

We are also developing NOV-002 to treat early-stage breast cancer in combination with chemotherapy. These patients are often treated with chemotherapy to minimize surgical intervention. A U.S. Phase 2 trial to evaluate the ability of NOV-002 to enhance the effectiveness of such chemotherapy while diminishing dose-limiting side-effects commenced in June 2007 at the Medical University of South Carolina. Interim results are expected in mid-2008.

Breast cancer remains a serious public health concern throughout the world. According to American Cancer Society, about 180,000 women in the US were expected to be diagnosed with breast cancer in 2007, and approximately 40,000 were expected to die from the disease. Neoadjuvant therapy in early-stage breast cancer patients reduces the size of tumors, allowing for surgical removal with less tissue damage than if no prior chemotherapy was employed. Further, several studies have provided evidence that the development of pathologic complete response (pCR, a total absence of the original tumor as assessed by pathological analysis of surgically removed breast tissue) following neoadjuvant therapy may be associated with a higher probability of long-term survival. However, only approximately 20% of patients treated with current neoadjuvant chemotherapy achieve pCR.

The primary objective of our open-label single-arm trial is to define the rate of pCR in the affected breast after the preoperative administration of NOV-002 in combination with chemotherapy (doxorubicin and cyclophosphamide followed by docetaxel) in patients with stage IIB-IIIC breast cancer. Up to 46 women may be enrolled in the trial, and may receive up to eight cycles of NOV-002 in combination with chemotherapy.

NOV-205

NOV-205 for Chronic Hepatitis C

NOV-205 is a unique, injectable, small-molecule proprietary formulation of oxidized glutathione and inosine. We are developing NOV-205 in the U.S. for the treatment of chronic hepatitis C.

According to the World Health Organization, chronic hepatitis C affected 170 million people worldwide in 2003, and up to four million people are newly infected each year. Chronic infection can progress to cirrhosis and end-stage liver disease. While there are varying estimates about the size of the global market for hepatitis C drugs, according to a September 2006 publication of *Nature Reviews Drug Discovery* the current global market is believed to be in excess of \$3 billion per year, growing to more than \$8 billion by 2010. In the U.S., according to the Centers for Disease Control and Prevention, an estimated 3.9 million persons were infected with hepatitis C, and 2.7 million persons in the U.S. had chronic infection in 2003. Further, hepatitis C infections account for approximately 30,000 new infections and 8,000-10,000 deaths each year in the U.S.

NOV-205 was approved in Russia by the Ministry of Health in 2001 as monotherapy for the treatment of hepatitis B and C. The Russian approval of NOV-205 was supported by a Russian New Drug Application, which included studies in hepatitis B and C totaling 90 treated patients. An additional 88 patients were treated in previous anecdotal studies. After relatively short treatment periods (1-2 months), the drug was shown to eliminate the serum viral load in hepatitis B patients and to decrease viral load below detection in 40-60% of hepatitis C subjects. Importantly, these reductions were largely maintained during 1-3 months of post-treatment follow-up. In addition, NOV-205 improved liver function as evidenced by significant reductions in serum biochemical markers of liver toxicity. No NOV-205-related adverse events were reported among any of the 178 patients treated in these studies.

The therapeutic profile of NOV-205 contrasts sharply with those of currently approved therapies in the U.S., which have limited effectiveness, are expensive and have severe side effects, particularly in the case of chronic hepatitis C. For example, pegylated interferon and ribavirin combinations have limitations of safety and tolerability (40-65% of treated patients experience fatigue, depression, fever, headaches, muscle pain, anemia). Furthermore, these drugs are effective in only a fraction of the patient population and are very expensive. Other new products for hepatitis C, beyond variations of ribavirin and interferon (e.g., HCV protease inhibitors), are at early stages of development and could potentially be used in combination with NOV-205.

On the basis of the clinical and pre-clinical data package underlying Russian approval of NOV-205 in combination with U.S. chemistry and manufacturing information, we filed an Investigational New Drug Application with the FDA for NOV-205 as monotherapy in chronic hepatitis C in March 2006. The FDA accepted our Investigational New Drug Application in April 2006, and a U.S. Phase 1b trial in patients who previously failed treatment with pegylated interferon plus ribavirin commenced in September 2006 and was completed in December 2007. Based on the favorable safety data obtained from this trial, we expect to initiate a longer duration proof-of-concept trial in the second half of 2008.

Non-clinical Research Program

Our non-clinical research program is aimed at (a) gaining a better understanding of the mechanism(s) of action of our oxidized glutathione-based drug products and (b) adding to the Russian non-clinical data information that will be required for ultimate FDA filing of our products. This research is being performed via a network of academic and commercial (i.e., contract research organizations) laboratories.

We are engaged in funded research collaboration with the laboratory of Kenneth Tew, Ph.D., D.Sc., Chairman of the Department of Cell and Molecular Pharmacology and Experimental Therapeutics at The Medical University of South Carolina. Dr. Tew is also chairman of our Scientific Advisory Board and a stockholder. The general objectives of this research program are to add to the understanding of NOV-002 and NOV-205 as drug products, particularly with respect to their molecular and cellular mechanism(s) of action and to facilitate: (1) the design and execution of clinical studies, (2) the interactions with the FDA and (3) the interactions with others in the scientific community. Funded research collaborations are also underway at other academic/scientific institutions including Harvard/Massachusetts General Hospital, the Wistar Institute and the University of Massachusetts Medical Center to further elaborate *in vitro* and *in vivo* mechanisms of drug action that may underlie the clinical therapeutic profiles of NOV-002 and NOV-205.

Manufacturing

Our proprietary manufacturing process is well-established, simple, inexpensive and scalable. We have used U.S. and Canadian contract manufacturing facilities that are registered with the FDA to support our U.S. development efforts. We do not plan to build manufacturing capability over the next several years. Rather, we plan to continue to employ contract manufacturers.

The active pharmaceutical ingredient of NOV-002 is manufactured in the U.S. in compliance with current Good Manufacturing Practices at Synthetech, Inc. (Albany, OR) in a single, very cost-effective synthetic step and then lyophilized into a powder at Oregon Freeze Dry, Inc. (Albany, OR). It is then filled, finished and packaged at Hyaluron (Burlington, MA) as a sterile filtered, aseptically processed solution for intravenous, intramuscular and/or subcutaneous use. NOV-002 clinical trial material (vials containing the active pharmaceutical ingredient and solution) has successfully completed 36-month stability studies.

Similar to NOV-002, NOV-205's active pharmaceutical ingredient is manufactured in compliance with current Good Manufacturing Practices in a single, very cost effective, synthetic step at Synthetech, Inc. and then lyophilized into a powder at Oregon Freeze Dry, Inc. It is then filled, finished and packaged at Dalton Pharma Services Inc. (Toronto, Canada).

Intellectual Property

We own all intellectual property rights worldwide (excluding Russia and other states of the former Soviet Union) related to both clinical-stage compounds (i.e., NOV-002 and NOV-205) and other pre-clinical compounds based on oxidized glutathione. We have five issued patents in the U.S. We also have two issued patents in Europe and one in Japan. Overall, we have filed more than 30 patent applications worldwide.

We believe that our breadth of intellectual property will allow us to expand our pipeline by claiming and commercializing additional compounds that are based on oxidized glutathione.

Employees

As of April 1, 2008 we have ten employees, eight of whom are full-time employees. We believe our relationships with our employees are good.

Regulation

The manufacturing and marketing of NOV-002 and NOV-205 and our related research and development activities are subject to regulation for safety, efficacy and quality by numerous governmental authorities in the United States and other countries. We anticipate that these regulations will apply separately to each drug and compound in our drug therapy technology. We believe that complying with these regulations will involve a considerable level of time, expense and uncertainty.

In the United States, drugs are subject to rigorous federal regulation and, to a lesser extent, state regulation. The Federal Food, Drug and Cosmetic Act and other federal and state statutes and regulations govern, among other things, the testing, manufacture, safety, efficacy, labeling, storage, recordkeeping, approval, advertising and promotion of our drugs. Drug development and approval within this regulatory framework is difficult to predict and will take a number of years and involve the expenditure of substantial resources.

The steps required before a pharmaceutical agent may be marketed in the United States include:

- Pre-clinical laboratory tests, *in vivo* pre-clinical studies, and formulation studies;
- The submission to the FDA of an Investigational New Drug Application for human clinical testing, which must become effective before human clinical trials can commence;
- Adequate and well controlled human clinical trials to establish the safety and efficacy of the product;
- The submission of a New Drug Application or Biologic Drug License Application to the FDA; and
- FDA approval of the New Drug Application or Biologic Drug License Application prior to any commercial sale or shipment of the product.

In addition to obtaining FDA approval for each product, each product manufacturing facility must be registered with and approved by the FDA. Manufacturing facilities are subject to biennial inspections by the FDA and must comply with the FDA's Good Manufacturing Practices for products, drugs and devices.

Whether or not FDA approval has been obtained, approval of a product by regulatory authorities in foreign countries must be obtained prior to the commencement of commercial sales of the drug in such countries. The requirements governing the conduct of clinical trials and drug approvals vary widely from country to country, and the time required for approval may be longer or shorter than that required for FDA approval. Although there are some procedures for unified filings for certain European countries, in general, each country at this time has its own procedures and requirements.

LITIGATION

We are not a party to any legal proceedings the outcome of which, in the opinion of our management, would have a material adverse effect on our business, financial condition, or results of operations.

PROPERTIES

We lease our executive office in Newton, Massachusetts. Our office consists of approximately 3,000 square feet and is rented for approximately \$7,700 per month. This lease expires in August 2009. We believe that our present facilities are adequate to meet our current needs. If new or additional space is required, we believe that adequate facilities are available at competitive prices.

MANAGEMENT

Directors and Executive Officers

Our current directors and executive officers are:

Name	Age	Position
Stephen A. Hill, B.M. B.Ch., M.A., F.R.C.S.	49	Chairman of the Board
Harry S. Palmin	38	President, Chief Executive Officer, Director
M. Taylor Burtis	56	Vice President of Regulatory, Quality and Compliance
Christopher J. Pazoles, Ph.D.	57	Vice President of Research and Development
Joanne M. Protano	39	Vice President, Chief Financial Officer and Treasurer
Kristin C. Schuhwerk	37	Vice President of Clinical Development and Operations
Michael J. Doyle (1) (2) (3)	49	Director
Sim Fass, Ph.D. (1) (2) (3)	66	Director
James S. Manuso, Ph.D.	59	Director
David B. McWilliams (2) (3)	64	Director
Simyon Palmin	63	Director
Howard M. Schneider (1) (3)	63	Director

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- (1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.

Our executive officers are appointed by, and serve at the discretion of, our board of directors. Simyon Palmin is the father of Harry Palmin.

Stephen A. Hill, B.M. B.Ch., M.A., F.R.C.S. Dr. Hill was elected our chairman of the board of directors in September 2007. Dr. Hill has served as ArQule's President and Chief Executive Officer since April 1999, a position from which he has resigned effective March 31, 2008. As of April 1, 2008, Dr. Hill joined Solvay Pharmaceuticals, Inc. as its President and Chief Executive Officer. Before joining ArQule, Dr. Hill was the Head of Global Drug Development at F. Hoffmann-La Roche Ltd. from 1997 to 1999. Dr. Hill joined Roche in 1989 as Medical Adviser to Roche Products in the United Kingdom. He held several senior positions at Roche, including Medical Director where he was responsible for clinical trials of compounds across a broad range of therapeutic areas, including CNS, HIV, cardiovascular, metabolic and oncology products. Subsequently, he served as Head of International Drug Regulatory Affairs at Roche headquarters in Basel, Switzerland, where he led the regulatory submissions for seven major new chemical entities. Dr. Hill also was a member of Roche's Portfolio Management, Research, Development and Pharmaceutical Division Executive Boards. Prior to Roche, Dr. Hill served seven years with the National Health Service in the United Kingdom in General and Orthopedic Surgery. Dr. Hill is a Fellow of the Royal College of Surgeons of England and holds his scientific and medical degrees from St. Catherine's College at Oxford University.

Harry S. Palmin. Mr. Palmin has served as our president and a director since 1998 and our chief executive officer since January 2005. From 1998 to September 2005, he served as our acting chief financial officer. From 1996 to 1998, he was a vice president at Lehman Brothers and from 1993 to 1996, he was an associate at Morgan Stanley & Co. Mr. Palmin earned a B.A. in economics and business and a M.A. in international economics and finance from the International Business School at Brandeis University. He has also studied at the London School of Economics and the Copenhagen Business School.

M. Taylor Burtis. Ms. Burtis has served as our vice president of regulatory, quality and compliance since July 2005. From October 2004 to June 2005, she served as a senior director of regulatory affairs at Therion Biologics. From November 2003 to September 2004, she served as a senior director of regulatory affairs at Antigenics. From May 2000 to October 2003, Ms. Burtis served as an associate director for worldwide regulatory affairs at Wyeth BioPharma. From 1996 to April 2000, she served as a senior manager of regulatory affairs at Genentech. From 1992 to 1996, Ms. Burtis was an FDA consumer safety officer in the Office of Compliance at the Center for Biologics Evaluation and Research. From 1991 to 1992, Ms. Burtis served as a medical research manager at Boston Veterans Administration Center. From 1987 to 1991, she served as a research lab manager at Children's Hospital, from 1985 to 1987, she served as a laboratory director at Brigham & Women's Hospital and from 1980 to 1985, she served as a technical specialist international liaison with the American Red Cross. Ms. Burtis earned a B.S. in biology from Framingham State College and a M.B.A. in operations and strategy from Simmons College.

Christopher J. Pazoles, Ph.D. Dr. Pazoles has served as our vice president of research and development since July 2005. From May 2004 to June 2005, he held a senior research and development position at the Abbott Bioresearch Center, a division of Abbott Laboratories. From October 2002 to January 2004, he served as chief operating officer and head of research and development at ALS Therapy Development Foundation. From 1994 to October 2002, Dr. Pazoles served as vice president of research for Phytera, Inc. From 1981 to 1994, he served as a researcher and senior manager with Pfizer. Dr. Pazoles holds a Ph.D. in microbiology from the University of Notre Dame.

Joanne M. Protano. Ms. Protano was appointed our vice president, chief financial and accounting officer, and treasurer in December 2007. She previously held the position of Senior Director of Finance and Controller of the Company from June 2006 to December 2007. From 1996 to 2006, she held various management and senior management positions with Ascential Software, Inc. and predecessor companies including Assistant Controller, Reporting for Ascential Software, Vice President and Chief Financial Officer for the Ascential Software Division of Informix Software, Inc. and Corporate Controller of Ardent Software, Inc. Prior to her tenure in the technology industry, from 1990 to 1996 she was employed by Deloitte and Touche LLP as an audit manager, where she practiced as a certified public accountant serving technology and healthcare clients. Ms. Protano received a B.S. in business administration from Bryant College.

Kristin C. Schuhwerk. Ms. Schuhwerk was appointed our vice president of clinical development and operations in December 2007. She previously served as our Director/Senior Director of Operations from July 2005 to December 2007. Prior to her employment at Novelos, she worked in the biopharmaceutical industry managing and overseeing business operations for multiple global Phase 2 and 3 clinical studies. From 2002 to 2005 she held the positions of Senior Project Manager and Director of Planning and Business Operations in Clinical Development at Antigenics, Inc., a cancer biotechnology company. From 1993 to 2002, she held research, project management and management positions at Boston University Medical Center, Parexel International, AstraZeneca and Brigham & Women's Hospital. Ms. Schuhwerk earned a B.S. degree in Chemistry from the University of New Hampshire.

Michael J. Doyle. Mr. Doyle has served as one of our directors since October 2005. Since October 2007 he has served as the chief executive officer of Medsphere Systems Corporation. From April 2006 to June 2007, he served as chief executive officer of Advantedge Healthcare Solutions. From January 2005 to March 2006, he served as chief executive officer of Windward Advisors. From March 2000 to December 2004, Mr. Doyle served as chairman and chief executive officer of Salesnet. From 1989 to 1997, he served as chairman and chief executive officer of Standish Care/Carematrix, a company he founded. He received a B.S. in biology from Tufts University and a M.B.A. with a concentration in finance and health care from the University of Chicago.

Sim Fass, Ph.D. Dr. Fass has served as one of our directors since February 2005. Dr. Fass, now retired, served as chief executive officer and chairman of Savient Pharmaceuticals from 1997 to 2004, its president and chief executive officer from 1984 to 1997, and its chief operating officer from 1983 to 1984. From 1980 to 1983, Dr. Fass served as vice president and general manager of Wampole Laboratories. From 1969 to 1980, he held a number of marketing, sales and senior management positions at Pfizer, Inc in both pharmaceuticals and diagnostics. He received a B.S. in biology and chemistry from Yeshiva College and a doctoral degree in developmental biology/biochemistry from the Massachusetts Institute of Technology.

James S. Manuso, Ph.D. Dr. Manuso was elected as one of our directors in August 2007. Since January 2005, Dr. Manuso has served as Chairman, President and Chief Executive Officer of SuperGen, Inc. and has served as a director of SuperGen since February 2001. Dr. Manuso is co-founder and former president and chief executive officer of Galenica Pharmaceuticals, Inc. Dr. Manuso co-founded and was general partner of PrimeTech Partners, a biotechnology venture management partnership, from 1998 to 2002, and Managing General Partner of The Channel Group LLC, an international life sciences corporate advisory firm. He was also president of Manuso, Alexander & Associates, Inc., management consultants and financial advisors to pharmaceutical and biotechnology companies. Dr. Manuso was a vice president and Director of Health Care Planning and Development for The Equitable Companies (now Group Axia), where he also served as Acting Medical Director. He currently serves on the board of privately-held KineMed, Inc. and Merrion Pharmaceuticals Ltd. (Dublin, Ireland). Previously, he served on the boards of Inflazyme Pharmaceuticals, Inc., Symbionics, Inc., Quark Biotech, Inc., Galenica Pharmaceuticals, Inc., and Supratek Pharma, Inc. Dr. Manuso earned a B.A. in economics and chemistry from New York University, a Ph.D. in experimental psychophysiology from the Graduate Faculty of The New School University, a certificate in health systems management from Harvard Business School, and an executive M.B.A. from Columbia Business School.

David B. McWilliams. Mr. McWilliams has served as one of our directors since March 2004. From February 2004 to December 2004, Mr. McWilliams performed chief executive officer services for us. Since August 2004, Mr. McWilliams has served as chief executive officer of Opexa Therapeutics, Inc. (formerly PharmaFrontiers Corp.). From 1992 to March 2002, he served as president, chief executive officer and a director of Encysive Pharmaceuticals (formerly Texas Biotech). From 1989 to 1992, Mr. McWilliams served as president, chief executive officer and director of Zonagen. From 1984 to 1988, he served as president and chief executive officer of Kallestad Diagnostics. From 1980 to 1984, he served as president of Harleco Diagnostics Division. From 1972 to 1980, he was an executive at Abbott Laboratories, rising to general manager for South Africa. From 1969 to 1972, he was a management consultant at McKinsey & Co. Mr. McWilliams is also a director of Fairway Medical Technologies, Houston Technology Center and Texas Healthcare and Bioscience Institute. Mr. McWilliams received a M.B.A. in finance from the University of Chicago and a B.A. in chemistry from Washington and Jefferson College.

Simyon Palmin. Mr. Palmin founded us in 1996. He served as our chairman of the board from 1996 until September 2007 and currently serves as a director and our director of Russian relations. From 1996 to February 2004, he served as our chief executive officer. From 1984 to 1998, Mr. Palmin served as vice president of strategic planning and vice president of new product development of Design Components Inc. Mr. Palmin received a B.S. in naval instrumentation from St. Petersburg Navy Institute, St. Petersburg, Russia and a M.A. in aviation instrumentation from the Institute of Aviation Instrumentation, St. Petersburg, Russia. He also completed studies for a Ph.D. in electrical engineering.

Howard M. Schneider. Mr. Schneider has served as one of our directors since February 2005. Mr. Schneider is currently retired. From January to December 2003, he served as chief executive officer of Metrosoft, Inc., and had been an advisor to such company from July to December 2002. From May 2000 to May 2001, he served as president of Wofex Brokerage, Inc. and from 1965 to 1999, he served as an executive at Bankers Trust Company holding a variety of positions in the commercial banking and investment banking businesses. Mr. Schneider received a B.A. in economics from Harvard College and a M.B.A. from New York University.

Compensation of Directors and Executive Officers

Executive Officer Compensation

Summary Compensation: The following table sets forth certain information about the compensation we paid or accrued with respect to our principal executive officer and our two most highly compensated executive officers (other than our chief executive officer) who served as executive officers during the year ended December 31, 2007 and whose annual compensation exceeded \$100,000 for that year.

Other annual compensation in the form of perquisites and other personal benefits has been omitted as the aggregate amount of those perquisites and other personal benefits was less than \$10,000.

Summary Compensation Table

Name and Principal Position	Year	Option					Total (\$)
		Salary (\$)	Bonus (\$)	Awards (\$)	All other compensation (\$)		
Harry S. Palmin (1) President, Chief Executive Officer	2007	\$ 245,000	\$ 37,500	\$ 59,660	\$ 0	\$ 342,160	
	2006	225,000	50,000	91,410	0	366,410	
Christopher J. Pazoles (2) Vice President of Research and Development	2007	\$ 216,720	\$ 30,000	\$ 37,288	\$ 0	\$ 284,008	
	2006	199,200	40,320	60,940	0	300,460	
M. Taylor Burtis (3) Vice President of Quality, Regulatory and Compliance	2007	\$ 203,175	\$ 20,000	\$ 29,830	\$ 0	\$ 253,005	
	2006	186,750	37,800	60,940	0	285,490	

(1) On December 17, 2007, the board of directors approved an increase in Mr. H. Palmin's annual base salary to \$270,000, effective January 1, 2008.

(2) On December 17, 2007, the board of directors approved an increase in Dr. Pazoles' annual base salary to \$223,000, effective January 1, 2008.

(3) On December 17, 2007, the board of directors approved an increase in Ms. Burtis' annual base salary to \$218,000, effective January 1, 2008.

(4) Bonus amounts shown in this column relate to services performed in the year shown, but were paid in the subsequent year. The bonus amount shown for 2007 represents 50% of the award approved by the compensation committee. The remaining 50% is payable upon the completion of an equity financing during 2008.

(5) The fair value of each stock award was estimated on the grant date using the Black-Scholes option-pricing model.

Employment Agreements

On January 31, 2006, we entered into an employment agreement with Harry Palmin effective January 1, 2006, whereby he agreed to serve as our president and chief executive officer for an initial term of two years at an annual salary of \$225,000. The agreement is automatically renewed for one-year terms unless 90-day notice is provided by either party. The agreement has been renewed for an additional one-year term in accordance with its terms. On December 17, 2007, the Board of Directors approved an increase in Mr. Palmin's annual salary to \$270,000 effective January 1, 2008. He is eligible to receive an annual cash bonus at the discretion of the compensation committee and he is entitled to participate in our employee fringe benefit plans or programs generally available to our senior executives. The agreement provides that in the event that we terminate Mr. Palmin without cause or he resigns for good reason (as defined below), we will (i) pay Mr. Palmin his pro rata share of the average of his annual bonus paid during the two fiscal years preceding his termination; (ii) pay Mr. Palmin his base salary for 11 months after the date of termination; (ii) continue to provide him benefits for 11 months after the date of termination; and (iii) fifty percent of his unvested stock options will vest. The agreement also contains a non-compete provision, which prohibits Mr. Palmin from competing with us for one year after termination of his employment with us.

"Cause" means (i) gross neglect of duties for which employed; (ii) committing fraud, misappropriation or embezzlement in the performance of duties as our employee; (iii) conviction or guilty or nolo plea of a felony or misdemeanor involving moral turpitude; or (iv) willfully engaging in conduct materially injurious to us or violating a covenant contained in the employment agreement.

"Good Reason" means (i) the failure of our board of directors to elect Mr. Palmin to the offices of president and chief executive officer; (ii) the failure by our stockholders to continue to elect Mr. Palmin to our board of directors; (iii) our failure to pay Mr. Palmin the compensation provided for in the employment agreement, except for across the board cuts applicable to all of our officers on an equal percentage basis, provided that such reduction is approved by our board of directors; (iv) relocation of Mr. Palmin's principal place of employment to a location beyond 50 miles of Newton, Massachusetts; (v) a reduction of base salary or material reduction in other benefits or any material change by us to Mr. Palmin's function, duties, authority, or responsibilities, which change would cause Mr. Palmin's position with us to become one of lesser responsibility, importance, or scope; and (vi) our material breach of any of the other provisions of the employment agreement.

On July 15, 2005, we entered into an employment agreement with Christopher J. Pazoles whereby he agreed to serve as our vice president of research and development for an initial term of two years. The agreement is automatically renewed for one-year terms unless 60-day notice is provided by either party. The agreement has been renewed for an additional one year term in accordance with its terms. The agreement provides for minimum salary and bonus amounts during the first two years of his employment. These minimum amounts have been satisfied. Dr. Pazoles' agreement provides that he is entitled to participate in our employee fringe benefit plans or programs generally available to our senior executives. The agreement further provides that in the event that we terminate Dr. Pazoles without cause or he resigns for good reason (as defined below), we will (i) pay Dr. Pazoles his base salary through the remainder of the term of his employment agreement in monthly installments; (ii) continue to provide him benefits for 12 months after the date of termination; and (iii) pay, on a prorated basis, any minimum bonus or other payments earned.

Dr. Pazoles also entered into a nondisclosure and development agreement with us, which prohibits him from competing with us and soliciting our employees or customers during the term of his employment and for two years thereafter. If we terminate his employment without cause, this prohibition will only extend for six months after his termination.

"Cause" means Dr. Pazoles (i) has willfully failed, neglected, or refused to perform his duties under the employment agreement; (ii) has been convicted of or pled guilty or no contest to a crime involving a felony; or (iii) has committed any act of dishonesty resulting in material harm to us.

"Good Reason" means that Dr. Pazoles has resigned due to our failure to meet any of our material obligations to him under the employment agreement.

Outstanding equity awards at Fiscal Year-End. The following table sets forth certain information regarding stock options held as of December 31, 2007 by the executive officers named in the summary compensation table.

Outstanding Equity Awards at Fiscal Year-End

Name	Year of Grant	Individual Grants		Exercise or base price (\$/share)	Expiration date
		Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable		
Harry S. Palmin	2007(1)	—	200,000	\$ 0.45	12/17/2017
	2006(1)	50,000	100,000	0.91	12/11/2016
	2005(2)	250,000	—	0.01	1/31/2015
	2005(2)	150,000	—	0.01	3/31/2015
	2004(3)	330,000	—	0.01	4/1/2014
	2003(4)	7,130	—	0.70	8/1/2013
Christopher J. Pazoles.	2007(1)	—	125,000	\$ 0.45	12/17/2017
	2006(1)	33,333	66,667	0.91	12/11/2016
	2005(5)	200,000	—	0.01	4/8/2015
	2004(6)	16,667	—	0.01	4/1/2014
M. Taylor Burtis	2007(1)	—	100,000	\$ 0.45	12/17/2017
	2006(1)	33,333	66,667	0.91	12/11/2016
	2005(7)	150,000	—	2.20	7/1/2015

- (1) These shares vest annually in increments of one-third over three years from the date of grant. The exercise price equals the closing price on the date of grant.
- (2) These shares initially vested over a two-year period. Pursuant to their terms, the shares fully vested upon the completion of a non-bridge loan financing, which occurred in the second quarter of 2005. The exercise price equals the fair market value of our common stock on the date of grant as determined by our board of directors.
- (3) These shares initially vested one-third upon grant and one third annually over the following two years. Pursuant to their terms, one additional year of vesting occurred upon the completion of a non-bridge loan financing, which occurred in the second quarter of 2005. The exercise price equals the fair market value of our common stock on the date of grant as determined by our board of directors.
- (4) These shares vest annually in increments of one-third over three years from the date of grant. The exercise price equals the fair market value of our common stock on the date of grant as determined by our board of directors.
- (5) These shares vest in increments of one-fourth every six months over two years from the date of grant. The exercise price equals the fair market value of our common stock on the date of grant as determined by our board of directors.
- (6) These shares represent the fully vested portion of an option grant made to Mr. Pazoles in consideration of consulting services delivered during 2004. Pursuant to their terms, the shares vested at the completion of the consulting engagement expire ten years from the date of grant.
- (7) These shares vest in increments of one-fourth every six months over two years from the date of grant. The exercise price equals the closing price on the date of grant.

Options granted pursuant to the 2006 Stock Incentive Plan will become fully vested upon a termination event within one year following a change in control, as defined. A termination event is defined as either termination of employment other than for cause or constructive termination resulting from a significant reduction in either the nature or scope of duties and responsibilities, a reduction in compensation or a required relocation.

Director Compensation

Summary Compensation: The following table sets forth certain information about the compensation we paid or accrued with respect to our directors who served during the year ended December 31, 2007.

Name and Principal Position	Year	Director Fees (\$) (2)	Option Awards (\$) (3)	All other compensation (\$)	Total (\$)
Stephen A. Hill, Chairman	2007	\$ 10,542	\$ 70,020	\$ —	\$ 80,562
Michael J. Doyle, Director	2007	31,500	17,919	—	49,419
Sim Fass, Director	2007	30,750	17,919	—	48,669
James S. Manuso, Director	2007	8,250	37,510	—	45,760
David B. McWilliams, Director	2007	25,000	17,919	—	42,919
Simyon Palmin, Director and director of Russian relations (1)	2007	—	—	81,880	81,880
Howard M. Schneider, Director	2007	38,000	17,919	—	55,919

(1) Other compensation for Simyon Palmin represents salary and bonus he received in his capacity as director of Russian relations for the Company.

(2) Director fees include all fees earned for director services including quarterly fees, meeting fees and committee chairman fees.

(3) The fair value of each stock award was estimated on the grant date using the Black-Scholes option-pricing model. See Note 6 to the financial statements for a description of the assumptions used in estimating the fair value of stock options.

During 2007, we paid our non-employee directors a cash fee of \$4,000 per quarter. The non-employee directors also received a fee of \$1,500 for any board or committee meeting attended or \$750 for each telephonic board or committee meeting in which the director participated. We also paid our chairman an additional annual fee in the amount of \$15,000 (prorated for the portion of the year during which he served as chairman), each non-employee director who serves as the chair of the audit committee an additional annual fee of \$10,000 and each non-employee director who serves as the chairman of the compensation and nominating and corporate governance committees an additional annual fee of \$5,000. We reimbursed directors for reasonable out-of-pocket expenses incurred in attending board and committee meetings and undertaking certain matters on our behalf. Directors who are our employees will not receive separate fees for their services as directors.

During 2007, each non-employee director received an annual stock option grant of 30,000 shares of our common stock at the closing price of our common stock on the first trading day of the fiscal year. These options vest on a quarterly basis over a two-year period.

Effective January 1, 2008, the quarterly cash fee payable to non-employee directors was increased to \$5,000. Payment of the \$1,000 increase over the 2007 fees will be deferred until the closing of an equity financing.

On January 2, 2008, options to purchase 40,000 shares of our common stock were granted for 2008 to each of our non-employee directors at the closing price of our common stock on that day. These options vest on a quarterly basis over a two-year period.

Equity compensation plans

The following table provides information as of December 31, 2007 regarding shares authorized for issuance under our equity compensation plans, including individual compensation arrangements.

We have two equity compensation plans approved by our stockholders: the 2000 Stock Option and Incentive Plan and the 2006 Stock Incentive Plan. We have also issued options to our directors and consultants that were not approved by our stockholders. These options are exercisable within a ten-year period from the date of the grant and vest at various intervals with all options being fully vested within three years of the date of grant. The option price per share is not less than the fair market value of our common stock on the date of grant.

Equity compensation plan information

Plan category	Number of shares to be issued upon exercise of outstanding options, warrants and rights (#) (a)	Weighted-average exercise price of outstanding options, warrants and rights (\$) (b)	Number of shares remaining available for future issuance under equity compensation plans (excluding shares reflected in column (a)) (#) (c)
Equity compensation plans approved by stockholders	2,293,873	\$ 0.81	2,780,000
Equity compensation plans not approved by stockholders	2,553,778	\$ 0.55	0
Total	4,847,651	\$ 0.67	2,780,000

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

At the close of business on April 11, 2008, there were issued and outstanding 39,360,272 shares of our common stock. The following table provides information regarding beneficial ownership of our common stock as of April 11 2008:

- Each person known by us to be the beneficial owner of more than five percent of our common stock;
- Each of our directors;
- Each executive officer named in the summary compensation table; and
- All of our current directors and executive officers as a group.

The address of each executive officer and director is c/o Novelos Therapeutics, Inc., One Gateway Center, Suite 504, Newton, Massachusetts 02458. The persons named in this table have sole voting and investment power with respect to the shares listed, except as otherwise indicated. The inclusion of shares listed as beneficially owned does not constitute an admission of beneficial ownership. Shares included in the “Right to acquire” column consist of shares that may be purchased through the exercise of options that vest within 60 days of April 11, 2008.

Name and Address of Beneficial Owner	Shares Beneficially Owned			
	Outstanding	Right to Acquire	Total	Percentage
Harry S. Palmin (1)	582,118	787,130	1,369,248	3.4%
M. Taylor Burtis	0	183,333	183,333	*
Christopher J. Pazoles	0	250,000	250,000	*
Stephen A. Hill	0	61,250	61,250	*
Michael J. Doyle	0	140,625	140,625	*
Sim Fass	0	140,625	140,625	*
James S. Manuso	0	42,500	42,500	*
David McWilliams	0	193,403	193,403	*
Simyon Palmin (2)	1,947,481	487,826	2,435,307	6.1%
Howard Schneider	100,000	40,625	140,625	*
All directors and officers as a group (12 persons)	2,629,599	2,485,650	5,115,249	12.2%

* Less than one percent.

- (1) Shares owned by H. Palmin include 94,000 shares owned by his wife, Deanna Palmin.
- (2) Shares owned by S. Palmin include 236,542 shares owned by his wife, Alla Palmin.
- (3) The terms of the Series D Preferred Stock and common stock purchase warrants provide that the number of shares of common stock to be obtained by each of the holders of Series D Preferred Stock and common stock purchase warrants, upon conversion of the Series D Preferred Stock or exercise of the common stock purchase warrants, cannot exceed the number of shares that, when combined with all other shares of our common stock and securities owned by each of them, would result in any one of them owning more than 4.99% or 9.99%, as applicable in the certificate of designations and warrant agreement, of our outstanding common stock, provided, however that this limitation may be revoked by the stockholder upon 61 days prior notice to us. For this reason, holders of our Series D Preferred Stock who might otherwise have the right to acquire 5% or more of our common stock have been omitted from this table. Similar provisions apply to outstanding shares of our Series C Preferred Stock and common stock purchase warrants issued to the holders of Series C Preferred Stock and therefore holders of our Series C Preferred Stock who might otherwise have the right to acquire 5% or more of our common stock have also been omitted from this table.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

As a result of the assignment to Novelos of the exclusive worldwide intellectual property and marketing rights of oxidized glutathione (excluding Russia and the states of the former Soviet Union), Novelos is required to pay Oxford Group, Ltd., a company that provides consulting and financial services, a royalty in the amount of 0.8% of our net sales of oxidized glutathione-based products. One of our directors is president of Oxford Group, Ltd.

We are obligated to ZAO BAM, the Russian company that invented NOV-002 and NOV-205, under a royalty and technology transfer agreement. One of our former directors, Mark Balazovsky, is the majority shareholder of ZAO BAM. Mr. Balazovsky resigned from our board of directors in November 2006. Pursuant to the royalty and technology transfer agreement between us and ZAO BAM, we are required to make royalty payments of 1.2% of net sales of oxidized glutathione-based products. We are also required to pay ZAO BAM \$2 million for each new oxidized glutathione-based drug within eighteen months following FDA approval of such drug.

If a royalty is not being paid to ZAO BAM on net sales of oxidized glutathione products, then the Company is required to pay ZAO BAM 3% of all license revenues. If license revenues exceed the Company's cumulative expenditures including, but not limited to, preclinical and clinical studies, testing, FDA and other regulatory agency submission and approval costs, general and administrative costs, and patent expenses, then the Company would be required to pay ZAO BAM an additional 9% of the amount by which license revenues exceed the Company's cumulative expenditures.

Director Independence

Each member of the Audit Committee, the Compensation Committee and the Nominating and Corporate Governance Committee meets the independence requirements of the Nasdaq Stock Market for membership on the committees on which he serves. The board of directors considered the information included in transactions with related parties as outlined above along with other information the board considered relevant, when considering the independence of each director. Messrs. Harry and Simyon Palmin are not independent directors.

PRIVATE PLACEMENTS OF CONVERTIBLE PREFERRED STOCK AND WARRANTS

On May 2, 2007, pursuant to a securities purchase agreement dated April 12, 2007, as amended on May 2, 2007, we sold 300 shares of a newly created series of preferred stock, designated "Series B Convertible Preferred Stock", with a stated value of \$50,000 per share (the "Series B Preferred Stock") and issued warrants to purchase 7,500,000 shares of common stock to the selling stockholders for an aggregate purchase price of \$15,000,000 (the "Series B Financing"). The shares of Series B Preferred Stock issued to the investors were initially convertible into shares of common stock at \$1.00 per share at any time after issuance, at the option of the holder. If all the shares of Series B Preferred Stock were converted following closing, a total of 15,000,000 shares of common stock would have been issued.

On April 11, 2008, pursuant to a securities purchase agreement dated March 26, 2008, as amended on April 9, 2008, we sold 113.5 shares of our "Series D Convertible Preferred Stock", with a stated value of \$50,000 per share (the "Series D Preferred Stock"), and issued warrants to purchase up to 3,846,151 shares of common stock (the "Series D Financing") to the selling stockholders. If all of these shares of Series D Preferred Stock were converted following the closing, a total of 8,730,769 shares of common stock would have been issued.

Upon the closing of the Series D Financing, the holders of our Series B Preferred Stock, exchanged all 300 shares of their Series B Preferred Stock for 300 shares of Series D Preferred Stock. Following the exchange, no shares of Series B Preferred Stock are outstanding. The rights and preferences of the Series D Preferred Stock are substantially the same as the Series B Preferred Stock, however the conversion price of the Series D Preferred Stock is \$0.65. As a result of the reduced conversion price, Series B Preferred Stock that was convertible into 15,000,000 shares of common stock has been exchanged for shares of Series D Preferred Stock that are convertible into 23,076,900 shares of common stock. If all outstanding shares of Series D Preferred Stock were converted following the closing, a total of 31,807,669 shares of common stock would have been issued.

Common Stock Purchase Warrants

In connection with the Series D Financing, we issued five-year warrants to purchase an aggregate of 4,365,381 shares of our common stock for an aggregate purchase price of \$5,675,000 (the "Series D Warrants"). The Series D Warrants have an exercise price of \$0.65 per share and expire in April 2013.

In connection with the Series B Financing, we issued warrants to purchase an aggregate of 7,500,000 shares of our common stock (the "Series B Warrants"). The Series B warrants had an initial exercise price of \$1.25 per share and expired in May 2012. In connection with the Series D Financing, the terms of the Series B warrants were amended to conform the terms of the Series B Warrants to the Series D Warrants. The Series B Warrants as amended have an exercise price of \$0.65 per share and expire in April 2013.

Both the Series B Warrants and the Series D Warrants provide that, if there is an effective registration statement covering the shares underlying the warrants and the VWAP, as defined in the warrants, of our common stock exceeds \$2.50 for 20 consecutive trading days, then on the 31st day following the end of such period any remaining warrants for which a notice of exercise was not delivered shall no longer be exercisable and shall be converted into a right to receive \$.01 per share.

Registration Rights Agreements

In connection with the Series B Financing, we entered into a registration rights agreement that required us to file with the SEC no later than June 1, 2007, a registration statement covering the resale of 23,400,000 shares of common stock (i.e. 100% of the shares of common stock issuable upon conversion of the Series B Preferred Stock and exercise of the related warrants). We filed a registration statement covering 23,400,000 shares of common stock on May 25, 2007. After discussion with the SEC, the registration statement was amended to cover only 12,000,000 shares of common stock issuable upon conversion of 240 shares of the Series B Preferred Stock. The holders of Series B Preferred Stock (i) consented to the reduction of shares being covered by the registration statement from 23,400,000 to 12,000,000, (ii) agreed to extend the date by which the registration statement must be declared effective from August 30, 2007 to September 7, 2007 and (iii) waived, through September 7, 2007, any liquidated damages arising as a result of the reduction in the number of shares being registered and by the failure to have the registration statement declared effective by August 30, 2007. The SEC declared this registration statement effective on September 6, 2007.

On April 11, 2008 in connection with the closing of the Series D Financing, the holders of Series B Preferred Stock waived any and all liquidated damages arising under the registration rights agreement during the period from September 7, 2007 through the closing of the Series D Financing as a result of our failure to register 100% of the shares of common stock issuable upon conversion of the Series B Preferred Stock and exercise of the related warrants. In addition, we entered into an amendment to the above described registration rights agreement with the holders of our Series B Preferred Stock to (i) revise the definition of registrable securities under the agreement to only include the 12,000,000 shares of common stock that are included on this registration statement, (ii) clarify that our registration obligations survive the exchange of Series B Preferred Stock for Series D Preferred Stock and (iii) extend our registration obligations under the registration rights agreement by one year. Under the amended registration rights agreement, we are required to use our best efforts to keep the registration statement continuously effective under the Securities Act until the earlier of the date when all the registrable securities covered by the registration statement have been sold or the third anniversary of the closing. We are allowed to suspend the use of the registration statement for not more than 15 consecutive days or for a total of not more than 30 days in any 12-month period without incurring liability for the liquidated damages in certain circumstances.

In connection with the Series D Financing, we entered into a registration rights agreement with the investors which requires us to file with the SEC no later than 5 business days following the six-month anniversary of the closing of the Series D Financing, a registration statement covering the resale of (i) a number of shares of common stock equal to 100% of the shares issuable upon conversion of the Series D Preferred Stock (excluding 12,000,000 shares of common stock issuable upon conversion of the Series D Preferred Stock that are included on this registration statement), (ii) 3,846,151 shares of common stock issuable upon exercise of the Series D Warrants and (iii) 7,500,000 shares of common stock issuable upon exercise of the Series B Warrants. We are required to use our best efforts to have the registration statement declared effective and keep the registration statement continuously effective under the Securities Act until the earlier of the date when all the registrable securities covered by the registration statement have been sold or the second anniversary of the closing of the Series D Financing. In the event we fail to file the registration statement within the timeframe specified by the Registration Rights Agreement, we are required to pay to the investors liquidated damages equal to 1.5% per month (pro-rated on a daily basis for any period of less than a full month) of the aggregate purchase price of the Series D Preferred Stock and warrants until we file the delinquent registration statement. We will be allowed to suspend the use of the registration statement for not more than 15 consecutive days or for a total of not more than 30 days in any 12 month period.

Placement Agent

Upon the closing of the Series B Financing we paid a placement agent fee to Rodman & Renshaw LLC ("Rodman") and Rodman's subagent, Emerging Growth Equities, Ltd., in cash in the amount of \$1,050,000 and issued Rodman and the subagent warrants to purchase 765,000 and 135,000 shares of common stock, respectively, having the same terms as the warrants issued to the investors. This placement agent fee was made in accordance with a letter agreement dated February 12, 2007 between us and Rodman. We also agreed to indemnify Rodman from claims arising in relation to the services it provided to us in connection with the Letter Agreement. Following the closing of the Series D Financing we paid Rodman a cash fee of \$100,000.

Gross Proceeds and Payments to Selling Stockholders and Placement Agents in connection with Series B Financing

The gross proceeds totaled \$15,000,000 from the sale of the Series B Preferred Stock and warrants on May 2, 2007. In addition to the fees paid to the placement agents, we also reimbursed certain expenses incurred by the investors and Rodman in connection with the offering. The following table summarizes the net proceeds received by us after subtracting any payments that have been made or that are or may be required to be made to the selling stockholders, placement agents or any of their affiliates by May 2, 2008:

Gross proceeds	\$ 15,000,000
<i>Less payments made:</i>	
Placement agent fee – Rodman & Renshaw LLC	892,500
Placement agent fee – Emerging Growth Equities, Ltd.	157,500
Reimbursement of placement agent legal fees	18,400
Reimbursement of investor legal fees	77,000
Reimbursement of due diligence expenses	7,295
<i>Less payments that are be required to be made:</i>	
Dividends paid to holders of Series B Preferred Stock on September 30, 2007	562,500
Dividends due to holders of Series B Preferred Stock on March 31, 2008	675,000
<i>Less payments that may be required to be made:</i>	
Liquidated damages associated with registration rights defaults (1)	157,500
<i>Net (2)</i>	\$ 12,452,305
Total payments as a percentage of gross proceeds	17%

(1) The liquidated damages included in the above table have been calculated on the basis that the registration statement covering the shares being offered by the selling stockholders listed above is not declared effective by May 2, 2008 and excludes the damages that had accrued through April 11, 2008 and were waived on that date (as described under the caption below, “Exchange of Series B Preferred Stock for Series D Preferred Stock”).

(2) Net amount does not reflect fees and expenses that we incurred and paid directly to our legal counsel, accountants and other service providers in connection with the private placement of Series B Preferred Stock.

Gross Proceeds and Payments to Selling Stockholders and Placement Agents in connection with Series D Financing

The gross proceeds totaled \$5,675,000 for the sale of the Series D Preferred Stock and warrants on April 11, 2008. In addition to the fees paid to the placement agents, we also reimbursed certain expenses incurred by the investors in connection with the offering. The following table summarizes the net proceeds received by us after subtracting any payments that have been made or that are or may be required to be made to the selling stockholders, placement agents or any of their affiliates within the first year following the closing of the sale:

Gross proceeds	\$ 5,675,000
<i>Less payments made:</i>	
Placement agent fee - Rodman & Renshaw LLC	100,000
Reimbursement of investor legal fees	25,000
<i>Less payments that are be required to be made:</i>	
Dividends to be paid to holders of Series D Preferred Stock on June 30, 2008	113,000
Dividends to be paid to holders of Series D Preferred Stock on December 31, 2008	261,050
<i>Net (1)</i>	\$ 5,175,950
Total payments as a percentage of gross proceeds	8.8%

(1) Net amount does not reflect fees and expenses that we incurred and paid directly to our legal counsel, accountants and other service providers in connection with the private placement of Series D Preferred Stock.

Short Positions

Based on the information provided by the selling stockholders, as of August 29, 2007, none of the selling stockholders had an existing

short position in our common stock.

SELLING STOCKHOLDERS

Certain selling stockholders are offering up to 12,000,000 shares of our common stock which are issuable upon conversion of 156 shares of the Series D Preferred Stock which those selling stockholders acquired in the private placement and the subsequent exchange described above. The following table shows the number of shares being registered in relation to the outstanding shares of common stock held by non-affiliates as of April 11, 2008:

Outstanding shares of common stock on April 11, 2008	39,360,272
Less:	
Shares held by executive officers and directors	2,629,599
	36,730,673
Shares of common stock underlying the Series D Preferred Stock registered for resale on behalf of the selling stockholders	12,000,000

Relationships with the Selling Stockholders

Except as described above under the caption “Private Placements of Convertible Preferred Stock and Warrants”, none of the selling stockholders had any material relationship with us within the past three years.

Selling Stockholders Table

Based on the information supplied to us by each selling stockholder, the following table sets forth the approximate number of shares beneficially owned as of April 11, 2008 by each of the selling stockholders and their pledgees, assignees and successors in interest. The “Right to Acquire” column reflects beneficial ownership of shares subject to warrants and convertible preferred stock that may be exercised or converted within 60 days after April 11, 2008. The “Shares Offered” column reflects all of the shares that each selling stockholder may offer under this prospectus. Percentage ownership is based on 39,360,272 shares issued and outstanding as of April 11, 2008. The table assumes that the selling stockholders sell all of the shares.

We prepared the table below based on information supplied to us by the selling stockholders. Although we have assumed for purposes of the table that the selling stockholders will sell all of the shares offered by this prospectus, because the selling stockholders may offer from time to time all or some of their shares covered under this prospectus, or in another permitted manner, no assurances can be given as to the actual number of shares that will be resold by the selling stockholders or that will be held by the selling stockholders after completion of the resales.

The terms of the Series D certificate of designations and common stock purchase warrants provide that the number of shares to be obtained by each of the holders of Series D preferred stock and warrants, upon conversion of Series D preferred stock or exercise of our common stock purchase warrants, cannot exceed the number of shares that, when combined with all other shares of our common stock and securities owned by each of them, would result in any one of them owning more than 4.99% or 9.99%, as applicable, of our outstanding common stock at any given point in time, provided however that this limitation may be revoked by the stockholder upon 61 days prior notice to the Company. For purposes of the table below, we have disregarded these blocking provisions.

Information concerning the selling stockholders may change from time to time and changed information will be presented in a supplement to this prospectus if and when necessary and required. Except as described above, there are currently no agreements, arrangements or understandings with respect to the resale of any of the shares covered by this prospectus.

Except as described above and in the footnotes to the selling stockholders table and except for the ownership of our preferred stock and common stock purchase warrants, none of the selling stockholders had any material relationship with us within the past three years.

Selling Stockholders

Name of Beneficial Owner	Beneficial Ownership Prior to Offering			Shares Offered	Beneficial Ownership After Offering		
	Outstanding	Right to Acquire	Total		Outstanding	Right to Acquire	Percent
Xmark Opportunity Fund, Ltd. (1)	0	6,246,148	6,246,148	1,600,000	0	4,646,148	10.6
Xmark Opportunity Fund, L.P. (1)	0	3,180,766	3,180,766	800,000	0	2,380,766	5.7
Xmark JV Investment Partners, LLC	0	2,142,305	2,142,305	800,000	0	1,342,305	3.3
Caduceus Capital Master Fund Limited	157,300	5,438,457	5,595,757	1,600,000	157,300	3,995,757	9.6
Caduceus Capital II, L.P.	104,900	4,169,611	4,274,511	1,040,000	104,900	3,234,511	7.8
UBS Eucalyptus Fund, L.L.C.	94,400	2,784,997	2,879,397	1,040,000	94,400	1,839,397	4.7
PW Eucalyptus Fund, Ltd.	11,500	321,345	332,845	120,000	11,500	212,845	*
Knoll Capital Fund II Master Fund, Ltd.(1)	316,000	5,207,688	5,523,688	1,600,000	160,000	3,923,688	9.8
Europa International, Inc. (1)	1,409,300	6,592,302	8,001,602	1,600,000	859,300	6,401,602	17.1
Hunt BioVentures, L.P. (2)	0	6,435,572	6,435,572	1,800,000	0	4,635,572	10.5

* Less than 1%

- (1) Shares in the “Outstanding” column consist of shares purchased in market transactions following the closing of the sale of Series B Preferred Stock.
- (2) On October 1, 2007, Hunt BioVentures, L.P. purchased 5 shares of our Series B Preferred Stock and warrants to purchase 125,000 shares of our common stock from HFR SHC Aggressive Master Trust. The shares of Series B Preferred Stock were exchanged for shares of Series D Preferred Stock on April 11, 2008. The 384,615 shares of common stock issuable upon conversion of the 5 shares of Series D preferred stock and the 125,000 shares of common stock issuable upon exercise of the warrants are included in the “Right to Acquire” column.

Voting and Investment Control

The table below sets forth selling stockholders that are entities and the names of individuals having voting and investment control over the securities held by these entities. We determined beneficial ownership based upon information supplied to us by the selling stockholders and in accordance with rules promulgated by the Securities and Exchange Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. The inclusion of shares listed as beneficially owned does not constitute an admission of beneficial ownership. Except as otherwise indicated, we believe that the persons or entities named in the following table have voting and investment power with respect to all shares of common stock shown as beneficially owned by them, subject to community property laws where applicable, and have not held any office or maintained any material relationship, except as investor or as described above, with us, or any of our predecessors or affiliates, over the past three years. Certain of the individuals with voting and investment control have indicated that they exercise such control through a corporate or other organizational structure, which structural information has not been included.

The following entities have informed us that the following individuals have voting and investment control over our securities held by them:

Entity	Voting and Investment Control
Xmark Opportunity Fund, Ltd.	Mitchell Kaye and David Cavalier
Xmark Opportunity Fund, L.P.	Mitchell Kaye and David Cavalier

Entity	Voting and Investment Control
Xmark JV Investment Partners, LLC	Mitchell Kaye and David Cavalier
Caduceus Capital Master Fund Limited	Samuel D. Isaly
Caduceus Capital II, L.P.	Samuel D. Isaly
UBS Eucalyptus Fund, L.L.C.	Samuel D. Isaly
PW Eucalyptus Fund, Ltd.	Samuel D. Isaly
Knoll Capital Fund II Master Fund, Ltd.	Fred Knoll, KOM Capital Management as Investment Manager for Knoll Capital Fund II Master Fund, Ltd.
Europa International, Inc.	Fred Knoll, Knoll Capital Management as Investment Manager for Europa International Inc.
Hunt BioVentures, L.P.	Christopher W. Kleinert

DESCRIPTION OF SECURITIES

Under our amended and restated certificate of incorporation, our authorized capital stock consists of 150,000,000 shares of common stock, \$0.00001 par value per share and 7,000 shares of preferred stock, \$0.00001 par value per share.

Our amended and restated certificate of incorporation authorizes us to issue shares of our preferred stock from time to time in one or more series without stockholder approval. As of April 11, 2008, we had designated 400 shares of Series B convertible preferred stock, none of which were issued and outstanding on that date; 272 shares of Series C cumulative convertible preferred stock, all of which were issued and outstanding as of that date and 420 shares of Series D convertible preferred stock, 413.5 of which were issued and outstanding as of that date.

All outstanding shares of our common stock and preferred stock are duly authorized, validly issued, fully-paid and non-assessable.

Common Stock

Voting. Holders of our common stock are entitled to one vote per share held of record on all matters to be voted upon by our stockholders. Our common stock does not have cumulative voting rights. Persons who hold a majority of the outstanding common stock entitled to vote on the election of directors can elect all of the directors who are eligible for election.

Dividends. Subject to preferences that may be applicable to the holders of any outstanding shares of our preferred stock, the holders of our common stock are entitled to receive such lawful dividends as may be declared by our board of directors.

Liquidation and Dissolution. In the event of our liquidation, dissolution or winding up, and subject to the rights of the holders of any outstanding shares of our preferred stock, the holders of shares of our common stock will be entitled to receive pro rata all of our remaining assets available for distribution to our stockholders.

Other Rights and Restrictions. Our charter prohibits us from granting preemptive rights to any of our stockholders. All outstanding shares are fully paid and nonassessable.

Listing. Our common stock is traded on the over-the-counter bulletin board under the trading symbol “NVLT.OB”.

Series C 8% Cumulative Convertible Preferred Stock

Stated Value: The Series C preferred stock has a stated value of \$12,000 per share.

Voting Rights: The Series C preferred stockholders do not have voting rights.

Dividends: The Series C preferred stock has an annual dividend rate of 8% until October 1, 2008 and thereafter has an annual dividend rate of 20%. The dividends are payable quarterly commencing on June 30, 2007. Such dividends shall only be paid after all outstanding dividends on the Series B preferred stock (with respect to the current fiscal year and all prior fiscal years) shall have been paid to the holders of the Series B preferred stock. Such dividends shall be paid in cash. Upon the occurrence of an event of default (as defined in the Series C Certificate of Designations) the dividend rate shall increase to 20%.

Conversion: Each share of Series C preferred stock is convertible at a price of \$1.00 per common share. The Series C preferred stock can be converted only to the extent that the Series C stockholder will not, as a result of the conversion, hold in excess of 4.99% of the total outstanding shares of our common stock, provided however that this limitation may be revoked by the stockholder upon 61 days prior notice to us.

Antidilution: Upon the occurrence of a stock split, stock dividend, combination of our common stock into a smaller number of shares, issuance of any of our shares or other securities by reclassification of our common stock, merger or sale of substantially all of our assets, the conversion rate shall be adjusted so that the conversion rights of the Series C preferred stock stockholders will be equivalent to the conversion rights of the Series C preferred stock stockholders prior to such event.

Redemption: The Series C preferred stock is not redeemable at the option of the holder. However, we may redeem the Series C preferred stock by paying to the holder a sum of money equal to one hundred twenty percent (120%) of the stated value per share plus any accrued but unpaid dividends upon 30 days' (during which time the Series A preferred stock may be converted) prior written notice if a registration statement has been filed with and declared effective by the Securities and Exchange Commission covering the shares of our common stock issuable upon conversion of the Series C preferred stock.

Dissolution: In the event of any voluntary or involuntary liquidation, dissolution or winding up of our affairs, the Series C preferred stock will be treated as senior to our common stock. After all required payments are made to holders of Series B preferred stock, the Series C preferred stockholders will be entitled to receive first, \$12,000 per share and all accrued and unpaid dividends. If, upon any winding up of our affairs, our remaining assets available to pay the holders of Series C preferred stock are not sufficient to permit the payment in full, then all our assets will be distributed to the holders of our Series C preferred stock (and any remaining holders of Series B preferred stock as may be required) on a pro rata basis.

Series D Convertible Preferred Stock

Stated Value: The Series D preferred stock has a stated value of \$50,000 per share.

Voting and Board Rights: The Series D preferred stockholders are entitled to vote on all matters on which the holders of common stock are entitled to vote. The number of votes to which each holder of Series D preferred stock is entitled is equal to the number of shares of common stock that would be issued to such holder if the Series D Preferred Stock had been converted at the record date for the meeting of stockholders.

Pursuant to the Securities Purchase Agreement dated March 26, 2008 from and after the closing of the sale of the Series D preferred stock, Xmark Opportunity Fund, Ltd. and its affiliates (the "Xmark Entities"), will have the right to designate one member to our Board of Directors. This right shall last until such time as the Xmark Entities no longer hold at least one-third of the Series D preferred stock issued to them at closing. In addition, the Xmark Entities and Caduceus Capital Master Fund Limited and its affiliates (together with the Xmark Entities, the "Lead Investors") will have the right to designate one observer to attend all meetings of our Board of Directors, committees thereof and access to all information made available to members of the Board. This right shall last until such time as the Lead Investors no longer hold at least one-third of the Series D preferred stock issued to them.

Dividends: The Series D preferred stock has a dividend rate of 9% per annum, payable semi-annually. Such dividends may be paid in cash or in registered shares of common stock. While any shares of Series D preferred stock remain outstanding, we are prohibited from paying dividends to common stockholders or any other class of preferred stock other than Series C preferred stock without the prior consent of the Series D holders. If consent is given, the holders of outstanding shares of Series D preferred stock are also entitled to participate in any dividends paid to common stockholders.

We have the financial ability to make all dividend payments and, if necessary, any payments for liquidated damages, to the Series D Preferred Stock investors. Following the closing of the sale of Series D preferred stock, we have approximately \$11,000,000 of cash and cash equivalents and approximately \$3,000,000 of capital surplus available for payment of dividends. Furthermore, the dividends on the Series D Preferred Stock are payable in cash or shares of our common stock, at our option.

Conversion: Each share of Series D preferred stock is convertible at a price of \$0.65 per common share at any time after issuance. The Series D preferred stock can be converted only to the extent that the Series B stockholder will not, as a result of the conversion, beneficially hold in excess of 4.99% or 9.99%, as applicable, of the total outstanding shares of our common stock, provided however that this limitation may be revoked by the stockholder upon 61 days prior notice to the Company. If there is an effective registration statement covering the shares of common stock underlying the outstanding shares of Series D preferred stock and the daily volume weighted average price (“VWAP”), as defined in the Series D Certificate of Designations, of our common stock exceeds \$2.00 for 20 consecutive trading days, then the outstanding Series D preferred stock will automatically convert into common stock at the conversion price then in effect.

Antidilution: Upon the occurrence of a stock split, stock dividend, combination of our common stock into a smaller number of shares, issuance of any of our shares or other securities by reclassification of our common stock, merger or sale of substantially all of our assets, the conversion rate shall be adjusted so that the conversion rights of the Series D preferred stock will be equivalent to the conversion rights of the Series D preferred stock stockholders prior to such event.

Liquidation: The Series D preferred stock ranks senior to all other outstanding series of preferred stock and common stock as to the payment of dividends and the distribution of assets upon voluntary or involuntary liquidation, dissolution or winding up of our affairs. The Series D preferred stockholders will be entitled to receive first, \$50,000 per share and all accrued and unpaid dividends. They are then entitled to participate with the holders of the remaining classes of common stock in the distribution of remaining assets on a pro rata basis. If, upon any winding up of our affairs, our assets available to pay the holders of Series D Preferred Stock are not sufficient to permit the payment in full, then all our assets will be distributed to the holders of our Series D Preferred Stock on a pro rata basis.

If we sell, lease or otherwise transfer substantially all of our assets, consummate a business combination in which we are not the surviving corporation or, if we are the surviving corporation, if the holders of a majority of our common stock immediately before the transaction do not hold a majority of our common stock immediately after the transaction, in one or a series of events, change the majority of the members of our board of directors, or if any person or entity (other than the holders of Series D Preferred Stock) acquires more than 50% of our outstanding stock, then the holders of Series D preferred stock are entitled to receive the same liquidation preference as described above, except that after receiving \$50,000 per preferred share and any accrued but unpaid dividends, they are not entitled to participate with other classes or common stock in a distribution of the remaining assets.

Other restrictions: For as long as any shares of Series D Preferred Stock remain outstanding, the Company is prohibited from (i) paying dividends to common stockholders; (ii) amending the Company’s certificate of incorporation; (iii) issuing any equity security or any security convertible into or exercisable for any equity security at a price of \$0.65 or less or with rights senior to the Series D Preferred Stock (except for certain exempted issuances); (iv) increasing the number of shares of Series D Preferred Stock or issuing any additional shares of Series D Preferred Stock other than the shares designated in the Series D Certificate of Designations; (v) selling or otherwise disposing of all or substantially all of the Company’s assets or intellectual property or entering into a merger or consolidation with another company unless Novelos is the surviving corporation, the Series D Preferred Stock remains outstanding and there are no changes to the rights and preferences of the Series D Preferred Stock; (vi) redeeming or repurchasing any capital stock other than Series D Preferred Stock; (vii) incurring any new debt for borrowed money in excess of \$500,000 and (viii) changing the number of the Company’s directors.

Anti-Takeover Effect of Delaware Law, Certain By-Law Provisions

Provisions of Delaware law, our charter and our by-laws could make it more difficult to acquire us by means of a merger, tender offer, proxy contest, open market purchases, removal of incumbent directors and otherwise. These provisions, which are summarized below, are expected to discourage types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of us to first negotiate with us. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging takeover or acquisition proposals because negotiation of these proposals could result in an improvement of their terms.

Authorized but Unissued Stock. We have shares of common stock and preferred stock available for future issuance, in some cases, without stockholder approval. We may issue these additional shares for a variety of corporate purposes, including public offerings to raise additional capital, corporate acquisitions, stock dividends on our capital stock or equity compensation plans.

The existence of unissued and unreserved common stock and preferred stock may enable our board of directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us, thereby protecting the continuity of our management. In addition, if we issue preferred stock, the issuance could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation.

Business Combinations. As a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years after the date the person becomes an interested stockholder, unless the business combination or the transaction in which the person becomes an interested stockholder is approved in a prescribed manner. Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to an interested stockholder. An interested stockholder includes a person who, together with affiliates and associates, owns, or did own within three years before the person was determined to be an interested stockholder, 15% or more of a corporation's voting stock. The existence of this provision generally will have an anti-takeover effect for transactions not approved in advance by the board of directors, including discouraging attempts that might result in a premium over the market price of our common stock.

Vacancies on the Board of Directors. Our by-laws provide that any vacancy on the board of directors, however occurring, including a vacancy resulting from an enlargement of the board, may be filled only by the vote of a majority of the directors then in office. This limitation on the filling of vacancies could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, control of us.

Special Meeting of Stockholders. Our by-laws provide that any action required or permitted to be taken by our stockholders at an annual meeting or special meeting of stockholders may only be taken if it is properly brought before the meeting.

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;

- privately negotiated transactions;
- short sales;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (2) three years following the closing of the sale of Series B Preferred Stock.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our charter contains provisions to indemnify our directors and officers to the maximum extent permitted by Delaware law. We believe that indemnification under our charter covers at least negligence on the part of an indemnified person. Our charter permits us to advance expenses incurred by an indemnified person in connection with the defense of any action or proceeding arising out of the person's status or service as our director, officer, employee or other agent upon an undertaking by the person to repay those advances if it is ultimately determined that the person is not entitled to indemnification.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the small business issuer pursuant to the foregoing provisions, or otherwise, the small business issuer has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and special reports, and other information with the Securities and Exchange Commission. Copies of the reports and other information may be read and copied at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You can request copies of such documents by writing to the SEC and paying a fee for the copying cost. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains a web site at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC.

This prospectus is part of a registration statement on Form SB-2 that we filed with the SEC. Certain information in the registration statement has been omitted from this prospectus in accordance with the rules and regulations of the SEC. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus. For further information you may:

- read a copy of the registration statement, including the exhibits and schedules, without charge at the SEC's Public Reference Room; or
- obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

LEGAL MATTERS

The validity of the securities being offered by this prospectus has been passed upon for us by Foley Hoag LLP, Boston, Massachusetts.

EXPERTS

Stowe & Degon have audited our financial statements as of December 31, 2007 and 2006 and for the years then ended. The financial statements referred to above are included in this prospectus with reliance upon the independent registered public accounting firm's opinion based on its expertise in accounting and auditing.

FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors
Novelos Therapeutics, Inc.
Newton, Massachusetts

We have audited the accompanying balance sheets of Novelos Therapeutics, Inc. as of December 31, 2007 and 2006 and the related statements of operations, redeemable preferred stock and stockholders' equity (deficiency) and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

As discussed in Note 6, effective January 1, 2006, the Company adopted Statement of Financial Accounting Standards (SFAS) No. 123(R), *Share-Based Payment*.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Novelos Therapeutics, Inc. as of December 31, 2007 and 2006 and the results of its operations, changes in stockholders' equity (deficiency) and cash flows for the years then ended in conformity with accounting principles generally accepted in the United States.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has incurred continuing losses in the development of its products. Additional funding will be required for the Company to meet its obligations for the following year. These factors raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in this regard are described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Stowe & Degon

Worcester, Massachusetts
March 17, 2008

NOVELOS THERAPEUTICS, INC.
BALANCE SHEETS

	December 31, 2007	December 31, 2006
ASSETS		
CURRENT ASSETS:		
Cash and equivalents	\$ 9,741,518	\$ 9,938,428
Restricted cash	1,184,702	1,655,251
Prepaid expenses and other current assets	133,281	294,995
Total current assets	11,059,501	11,888,674
FIXED ASSETS, NET	32,809	23,810
DEPOSITS	15,350	10,875
TOTAL ASSETS	\$ 11,107,660	\$ 11,923,359
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIENCY)		
CURRENT LIABILITIES:		
Accounts payable and accrued liabilities	\$ 6,372,478	\$ 1,088,041
Accrued compensation	349,412	225,384
Accrued dividends	337,500	—
Total current liabilities	7,059,390	1,313,425
COMMITMENTS AND CONTINGENCIES		
REDEEMABLE PREFERRED STOCK:		
Series B convertible preferred stock, \$0.00001 par value; 400 shares designated; 300 shares issued and outstanding at December 31, 2007 (liquidation preference \$15,337,500) (Note 4)	9,918,666	—
STOCKHOLDERS' EQUITY (DEFICIENCY):		
Preferred stock, \$0.00001 par value; 7,000 shares authorized: Series A 8% cumulative convertible preferred stock; no shares outstanding at December 31, 2007, 3,264 shares issued and outstanding at December 31, 2006; Series C 8% cumulative convertible preferred stock; 272 shares issued and outstanding at December 31, 2007 (liquidation preference \$3,264,000), no shares outstanding at December 31, 2006 (Note 4)	—	—
Common stock, \$0.00001 par value; 150,000,000 shares authorized; 39,260,272 shares issued and outstanding at December 31, 2007; 39,235,272 shares issued and outstanding at December 31, 2006	392	392
Additional paid-in capital	37,370,959	34,294,154
Accumulated deficit	(43,241,747)	(23,684,612)
Total stockholders' equity (deficiency)	(5,870,396)	10,609,934
TOTAL LIABILITIES, REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIENCY)	\$ 11,107,660	\$ 11,923,359

See notes to financial statements.

**NOVELOS THERAPEUTICS, INC.
STATEMENTS OF OPERATIONS**

	Year Ended December 31,	
	2007	2006
COSTS AND EXPENSES:		
Research and development	\$ 17,427,804	\$ 6,441,394
General and administrative	2,866,383	2,488,414
Total costs and expenses	20,294,187	8,929,808
OTHER INCOME:		
Interest income	729,922	637,752
Miscellaneous	7,130	6,000
Total other income	737,052	643,752
NET LOSS	(19,557,135)	(8,286,056)
PREFERRED STOCK DIVIDEND	(1,161,120)	(261,120)
PREFERRED STOCK DEEMED DIVIDEND	(9,003,083)	—
NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS	\$ (29,721,338)	\$ (8,547,176)
BASIC AND DILUTED NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	\$ (0.76)	\$ (0.23)
SHARES USED IN COMPUTING BASIC AND DILUTED NET LOSS ATTRIBUTABLE TO COMMON STOCKHOLDERS PER COMMON SHARE	39,247,532	37,179,878

See notes to financial statements.

NOVELOS THERAPEUTICS, INC.
STATEMENTS OF REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIENCY)

[illegible]

preferred stock	—	(7,824,385)	—	—	—	—	—	—	7,824,385	—	7,824,385
Deemed dividend related to the accretion of beneficial conversion feature on Series B redeemable convertible preferred stock	—	—	—	—	—	—	—	—	(7,824,385)	—	(7,824,385)
Retirement of Series A preferred stock and issuance of Series C preferred stock	—	—	—	—	(3,264)	—	272	—	—	—	—
Issuance of common stock purchase warrants in connection with exchange of preferred stock	—	—	—	—	—	—	—	—	1,138,698	—	1,138,698
Deemed dividend recorded in connection with exchange of Series A for Series C convertible preferred stock	—	—	—	—	—	—	—	—	(1,178,698)	—	(1,178,698)
Dividends paid on preferred stock	—	—	—	—	—	—	—	—	(823,620)	—	(823,620)
Dividends accrued on preferred stock	—	—	—	—	—	—	—	—	(337,500)	—	(337,500)
Net loss	—	—	—	—	—	—	—	—	—	(19,557,135)	(19,557,135)
BALANCE AT DECEMBER 31, 2007	<u>300</u>	<u>\$ 9,918,666</u>	<u>39,260,272</u>	<u>\$ 392</u>	<u>—</u>	<u>\$ —</u>	<u>272</u>	<u>\$ —</u>	<u>\$ 37,370,959</u>	<u>\$ (43,241,747)</u>	<u>\$ (5,870,396)</u>

See notes to financial statements.

NOVELOS THERAPEUTICS, INC.
STATEMENTS OF CASH FLOWS

	Year Ended December 31,	
	2007	2006
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$ (19,557,135)	\$ (8,286,056)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation and amortization	15,367	9,516
Stock-based compensation	503,290	588,043
Change in:		
Prepaid expenses and other current assets	161,714	122,803
Accounts payable and accrued liabilities	5,284,437	870,885
Accrued compensation	124,028	225,384
Cash used in operating activities	(13,468,299)	(6,469,425)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of fixed assets	(24,366)	(10,716)
Change in restricted cash	470,549	(1,458,343)
Deferred financing costs	—	24,612
Deposits	(4,475)	(1,219)
Cash provided by (used in) investing activities	441,708	(1,445,666)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of common stock, net	—	13,846,774
Proceeds from issuance of Series B convertible preferred stock, net	13,693,051	—
Dividends paid to preferred stockholders	(823,620)	(261,120)
Payment to preferred stockholders in connection with exchange of shares (1)	(40,000)	—
Proceeds from exercise of stock option	250	750
Cash provided by financing activities	12,829,681	13,586,404
INCREASE (DECREASE) IN CASH AND EQUIVALENTS	(196,910)	5,671,313
CASH AND EQUIVALENTS AT BEGINNING OF YEAR	9,938,428	4,267,115
CASH AND EQUIVALENTS AT END OF YEAR	\$ 9,741,518	\$ 9,938,428
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION		
SUPPLEMENTAL DISCLOSURES OF NON-CASH INVESTING AND FINANCING ACTIVITIES		
Deemed dividends on preferred stock	\$ 8,963,083	\$ —
Dividends declared but not paid to preferred stockholders	\$ 337,500	\$ —
Issuance of warrants to Series B preferred stockholders	\$ 3,774,385	\$ —
Issuance of warrants to placement agents	\$ 768,621	\$ —
Common stock issued for services	\$ —	\$ 144,050

(1) Included as a deemed dividend in the Statement of Operations.

See notes to financial statements.

NOVELOS THERAPEUTICS, INC.
NOTES TO FINANCIAL STATEMENTS

1. NATURE OF BUSINESS, ORGANIZATION AND GOING CONCERN

Novelos Therapeutics, Inc. (“Novelos” or the “Company”) is a drug development company, originally established in 1996 as AVAM International, focused on the development of therapeutics for the treatment of various cancers and infectious diseases. In 2005, we completed a two-step reverse merger with Common Horizons, Inc., and its wholly-owned subsidiary Nove Acquisition, Inc. Following the merger Novelos was the surviving company. Novelos owns exclusive worldwide intellectual property rights (excluding Russia and other states of the former Soviet Union) related to certain clinical compounds and other pre-clinical compounds based on oxidized glutathione. The Company operates in one business segment.

The Company is subject to a number of risks similar to those of other companies in an early stage of development. Principal among these risks are dependence on key individuals, competition from substitute products and larger companies, the successful development and marketing of its products in a highly regulated environment and the need to obtain additional financing necessary to fund future operations.

These financial statements have been prepared on the basis that the Company will continue as a going concern. The Company is devoting substantially all of its efforts toward the research and development of its products and has incurred operating losses since inception. The process of developing products will require significant research and development, non-clinical testing, clinical trials and regulatory approval. The Company expects that these activities, together with general and administrative costs, will result in continuing operating losses in the foreseeable future. The Company’s ability to continue as a going concern is dependent on its ability to obtain capital to fund these activities through the sale of equity and debt securities and through collaborative arrangements with partners. If the Company is unable to obtain capital through these sources, it may have to seek other sources of capital or reevaluate its operating plans. The accompanying financial statements do not include any adjustments that might be necessary in the event that the Company cannot continue as a going concern for the next year.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements reflect the application of certain accounting policies, as described in this note and elsewhere in the accompanying notes to the financial statements.

Use of 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, liabilities, revenue and expenses and disclosure of contingent assets and liabilities. Management’s estimates are based primarily on relevant historical experience and other assumptions that management believes to be reasonable. Estimates include those for unbilled contract service fees such as amounts due to clinical research organizations, clinical investigators and contract manufacturers. Actual results could differ from those estimates.

Cash Equivalents — The Company considers all short-term investments purchased with original maturities of three months or less to be cash equivalents.

Restricted Cash — Restricted cash at December 31, 2007 and 2006 includes \$1,185,000 and \$1,550,000, respectively, of cash pledged as security on a letter of credit agreement with a bank. See Note 9. Restricted cash at December 31, 2006 also includes approximately \$105,000 placed in escrow as contractually required under an employment agreement with an officer.

Fixed Assets — Property and equipment are stated at cost. Depreciation on property and equipment is provided using the straight-line method over the estimated useful lives of the assets, which range from three to five years. Leasehold improvements are depreciated over the lesser of the estimated useful lives of the assets or the remaining lease term.

Impairment of Long-Lived Assets — Whenever events or circumstances change, the Company assesses whether there has been an impairment in the value of long-lived assets by determining whether projected undiscounted cash flows generated by the applicable asset exceed its net book value as of the assessment date. There were no impairments of the Company's assets at the end of each period presented.

Stock-based Compensation — Effective January 1, 2006, the Company adopted the fair-value recognition provisions of Statement of Financial Accounting Standards (SFAS) No. 123(R), *Share-Based Payment* (SFAS 123R). The Company accounts for share-based payments granted to non-employees in accordance with Emerging Issues Task Force (EITF) No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*. See Note 6 for a further description of the Company's accounting policies related to stock-based compensation.

Revenue Recognition — Revenue is recognized when persuasive evidence of an arrangement exists, the price is fixed and determinable, delivery has occurred, and there is reasonable assurance of collection. Upfront payments received in connection with technology license or collaboration agreements are recognized over the estimated term of the related agreement. Milestone payments received in connection with license or collaboration agreements are recognized upon completion of the applicable milestones. Royalty revenue will be recognized upon the receipt of royalty reports from third parties.

Research and Development — Research and development costs are expensed as incurred.

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 temporary differences between financial statement and tax basis of assets and liabilities and net operating loss and credit carryforwards using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Valuation allowances are established when it is more likely than not that some portion of the deferred tax assets will not be realized.

The Company adopted FIN 48, *Accounting for Uncertainty in Income Taxes - an Interpretation of FASB Statement No. 109*, on the first day of its 2007 fiscal year. The implementation did not result in a material adjustment to the Company's liability.

Comprehensive Income (Loss) — The Company had no components of comprehensive income other than net loss in all of the periods presented.

Fair Value of Financial Instruments — SFAS No. 107, *Disclosures About Fair Value of Financial Instruments*, requires disclosure of the fair value of certain financial instruments. The Company's financial instruments consist of cash equivalents, accounts payable, accrued expenses and redeemable preferred stock. The estimated fair value of the redeemable preferred stock, determined on an as-converted basis, was \$8,850,000 at December 31, 2007. The estimated fair value of the remaining financial instruments approximates their carrying value due to their short-term nature.

Concentration of Credit Risk — Financial instruments that subject the Company to credit risk consist of cash and equivalents on deposit with financial institutions, which may exceed federally insured limits. The Company's excess cash is invested on an overnight basis in securities that are fully collateralized. The Company maintains cash and equivalent balances with a stable and well-capitalized financial institution.

New Accounting Pronouncements — In June 2007, the Emerging Issues Task Force reached a consensus on Issue No. 07-3 *Accounting for Nonrefundable Advance Payments for Goods or Services Received for Use in Future Research and Development Activities* (EITF 07-3). EITF 07-3 requires that nonrefundable advance payments for goods or services used or rendered for future research and development activities be deferred and capitalized and subsequently recognized as an expense as the goods are delivered or the related services are performed. EITF 07-3 is effective for fiscal years beginning after December 15, 2007 and interim periods within those fiscal years with no earlier application permitted. The Company is currently evaluating the effect of this consensus on its future reported financial position and results of operations.

In February 2007, the Financial Accounting Standards Board (FASB) issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities - Including an Amendment to FASB Statement No. 115* (SFAS 159). SFAS 159 permits entities to choose to measure many financial instruments and certain other items at fair value. SFAS 159 is effective for financial statements issued for fiscal years beginning after November 15, 2007. Earlier adoption is permitted as of the beginning of a fiscal year that begins on or before November 15, 2007, provided that the entity also elects to apply the provisions of SFAS 157. The Company is currently evaluating the effect of this standard on its future reported financial position and results of operations.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* (SFAS 157), to define fair value, establish a framework for measuring fair value in generally accepted accounting principles and expand disclosures about fair-value measurements. SFAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007 and interim periods within those fiscal years, with earlier application allowed. The Company is currently evaluating the effect of this standard on its future reported financial position and results of operations.

In February 2006, the FASB issued SFAS No. 155, *Accounting for Certain Hybrid Financial Instruments—an Amendment of FASB Statements No. 133 and 140* (SFAS 155), to simplify and make more consistent the accounting for certain financial instruments. SFAS 155 amends SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*, to permit fair-value remeasurement for any hybrid financial instrument with an embedded derivative that otherwise would require bifurcation, provided that the whole instrument is accounted for on a fair-value basis. SFAS 155 amends SFAS No. 140, *Accounting for the Impairment or Disposal of Long-Lived Assets*, to allow a qualifying special-purpose entity to hold a derivative financial instrument that pertains to a beneficial interest other than another derivative financial instrument. SFAS 155 applies to all financial instruments acquired or issued after the beginning of an entity's first fiscal year that begins after September 15, 2006, with earlier application allowed. This standard had no effect on the Company's reported financial position or results of operations in the year ended December 31, 2007.

Effective January 1, 2006, the Company adopted the provisions of SFAS No. 154, *Reporting Accounting Changes in Interim Financial Statements* ("SFAS 154"), which replaces APB Opinion No. 20, *Accounting Changes*, and SFAS No. 3, *Reporting Accounting Changes in Interim Financial Statement*. SFAS 154 changed the requirements for the accounting for and reporting of a change in accounting principle. SFAS 154 applies to all voluntary changes in accounting principle. It also applies to changes required by an accounting pronouncement in the unusual instance that the pronouncement does not include specific transition provisions. When a pronouncement includes specific transition provisions, those provisions should be followed. The adoption of SFAS 154 had no impact on the Company's financial position or results of operations.

3. FIXED ASSETS

Fixed assets consisted of the following at December 31:

	<u>2007</u>	<u>2006</u>
Office and computer equipment	\$ 51,652	\$ 52,537
Computer software	7,896	7,896
Leasehold improvements	4,095	2,500
Total fixed assets	63,643	62,933
Less accumulated depreciation and amortization	(30,834)	(39,123)
Fixed assets, net	<u>\$ 32,809</u>	<u>\$ 23,810</u>

Included in fixed assets is equipment under capital lease with a cost of \$13,061. The equipment was fully depreciated in all periods presented.

4. STOCKHOLDERS' EQUITY (DEFICIENCY)

2005 PIPE - From May 27, 2005 through August 9, 2005, the Company completed a private offering of securities structured as a "PIPE" (Private Investment in Public Equity), exempt from registration under the Securities Act of 1933, in which it sold to accredited investors 4,000,000 shares of common stock and issued 2,000,000 common stock warrants (initially exercisable at \$2.25 per share) for net cash proceeds of approximately \$3,715,000 (net of cash issuance costs of approximately \$735,000) and conversion of debt and accrued interest of \$550,000. In connection with the private placement, the Company also issued 125,000 shares of common stock to placement agents with a value of approximately \$156,000 and issued 340,000 common stock warrants to placement agents and finders at an initial exercise price of \$2.00 per share. Pursuant to anti-dilution provisions, the number of warrants issued to investors, placement agents and finders was subsequently increased to 3,139,312 and the exercise price of the warrants was reduced to \$1.65 per share as a result of the Series A Preferred financing described below. The 2006 PIPE transaction in March 2006 described below resulted in a further adjustment to the warrants, increasing the number of warrants to 3,836,967 and reducing the exercise price of the warrants to \$1.35 per share. The sale of Series B Preferred Stock described below resulted in a further adjustment to the warrants, increasing the number of warrants to 5,180,000 and reducing the exercise price of the warrants to \$1.00 per share.

Series A Preferred— On September 30, 2005 and October 3, 2005, the Company sold, in a private placement, a total of 3,200 shares of its Series A 8% Cumulative Convertible Preferred Stock (“Series A Preferred Stock”) and 969,696 common stock warrants for net proceeds of \$2,864,000, net of issuance costs of \$336,000. The preferred shares were originally convertible at a price of \$1.65 per common share into 1,939,393 shares of common stock and the warrants were exercisable at \$2.00 per share. The Series A Preferred Stock and warrants had anti-dilution provisions that provided for adjustments to the conversion or exercise price, as applicable, upon the occurrence of certain events. Pursuant to these anti-dilution provisions, both the conversion price of the preferred stock and the exercise price of the warrants were subsequently adjusted to \$1.35 per share on March 7, 2006 in connection with a subsequent offering of common stock described below (2006 PIPE) and the preferred stock then outstanding became convertible into 2,417,774 shares of common stock. Pursuant to the anti-dilution provisions contained in the warrants, the exercise price of the warrants was reduced to \$1.00 in connection with the sale of the Series B Preferred Stock described below. On May 2, 2007, the holders of Series A Preferred Stock exchanged all of their shares of Series A Preferred Stock for shares of Series C Preferred Stock (see “Series C Preferred” below).

During 2007, the Company paid cash dividends of \$87,765 (\$26.88 per preferred share) to Series A preferred stockholders through the date of the exchange of shares described below. During 2006, the Company paid cash dividends of \$261,120 to Series A preferred shareholders (\$80.00 per preferred share).

2006 PIPE — On March 7, 2006, the Company completed a private offering of securities structured as a PIPE, exempt from registration under the Securities Act of 1933, in which it sold to accredited investors 11,154,073 shares of common stock at \$1.35 per share and warrants to purchase 8,365,542 shares of its common stock exercisable at \$2.50 per share for net cash proceeds of approximately \$13,847,000 (net of issuance costs of approximately \$1,211,000, including placement agent fees of approximately \$1,054,000). In connection with the private placement, the Company issued 669,244 common stock warrants (exercisable at \$2.50 per share) to the placement agents. The fair value of the warrants issued to investors and placement agents was included as a component of permanent equity upon issuance. Pursuant to anti-dilution provisions, the number of warrants issued to investors and placement agents and finders was subsequently increased to 10,270,018 and the exercise price of the warrants was reduced to \$2.20 per share as a result of the sale of Series B Preferred Stock described below.

Registration Rights, 2005 and 2006 Financings - The shares of common stock sold in the 2005 PIPE and the 2006 PIPE and the shares of common stock issuable upon conversion of the Series C Preferred Stock and exercise of certain outstanding warrants have been registered for resale with the Securities and Exchange Commission. Pursuant to the registration rights associated with the financings, if the Company fails to maintain the effectiveness of the registration statements for the periods specified in the agreements, the Company may become obligated to pay liquidated damages to the selling stockholders. The Company believes that an investor claim for liquidated damages relating to these registration rights is not probable and therefore has not accrued for such a contingency at December 31, 2007.

Series B Preferred - On May 2, 2007, pursuant to a securities purchase agreement with accredited investors dated April 12, 2007 (the “Purchase Agreement”), as amended May 2, 2007, the Company sold 300 shares of a newly created series of preferred stock, designated “Series B Convertible Preferred Stock”, with a stated value of \$50,000 per share (the “Series B Preferred Stock”) and issued warrants to purchase 7,500,000 shares of common stock for an aggregate purchase price of \$15,000,000.

Rights and Preferences

The shares of Series B Preferred Stock issued to investors are convertible into shares of common stock at \$1.00 per share at any time after issuance at the option of the holder. If there is an effective registration statement covering the shares of common stock underlying the Series B Preferred Stock and the volume-weighted average price ("VWAP"), as defined in the Series B Certificate of Designations, of the Company's common stock exceeds \$2.00 for 20 consecutive trading days, then the outstanding Series B Preferred Stock will automatically convert into common stock at the conversion price then in effect. The conversion price is subject to adjustment only for stock dividends, stock splits or similar capital reorganizations. The Series B Preferred Stock has an annual dividend rate of 9%, payable semi-annually on September 30 and March 31. Such dividends may be paid in cash or in registered shares of the Company's common stock at the Company's option. During 2007, the Company declared dividends totaling \$900,000 (\$3,000 per share) to Series B preferred stockholders, \$562,500 (\$1,875 per share) of that amount was paid in cash during 2007. The Series B Preferred Stock ranks senior to all other outstanding series of preferred stock and common stock as to the payment of dividends and the distribution of assets upon voluntary or involuntary liquidation, dissolution or winding up of the Company's affairs. The Series B preferred stockholders will be entitled to receive first, \$50,000 per share and all accrued and unpaid dividends. They are then entitled to participate with the holders of the remaining classes of common stock in the distribution of remaining assets on a pro rata basis. If, upon any winding up of the Company's affairs, assets available to pay the holders of Series B Preferred Stock are not sufficient to permit the payment in full, then all assets will be distributed to the holders of Series B Preferred Stock on a pro rata basis. If the Company sells, leases or otherwise transfers substantially all of its assets, consummates a business combination in which the Company is not the surviving corporation or, if the Company is the surviving corporation, if the holders of a majority of the common stock immediately before the transaction do not hold a majority of common stock immediately after the transaction, in one or a series of events, change the majority of the members of the board of directors, or if any person or entity (other than the holders of Series B Preferred Stock) acquires more than 50% of the Company's outstanding stock, then the holders of Series B Preferred Stock are entitled to receive the same liquidation preference as described above, except that after receiving \$50,000 per preferred share and any accrued but unpaid dividends, they are not entitled to participate with other classes or common stock in a distribution of the remaining assets.

For as long as any shares of Series B Preferred Stock remain outstanding, the Company is prohibited from (i) paying dividends to common stockholders, (ii) amending the Company's certificate of incorporation, (iii) issuing any equity security or any security convertible into or exercisable for any equity security at a price of \$1.00 or less or with rights senior to the Series B Preferred Stock (except for certain exempted issuances), (iv) increasing the number of shares of Series B Preferred Stock or issuing any additional shares of Series B Preferred Stock other than the 400 shares designated in the Series B Certificate of Designations, (v) selling or otherwise disposing of all or substantially all of the Company's assets or intellectual property or entering into a merger or consolidation with another company unless Novelos is the surviving corporation, the Series B Preferred Stock remains outstanding and there are no changes to the rights and preferences of the Series B Preferred Stock, (vi) redeeming or repurchasing any capital stock other than Series B Preferred Stock, (vii) incurring any new debt for borrowed money and (viii) changing the number of the Company's directors. The Company is required to reserve, out of authorized shares of common stock, 125% of the number of shares of common stock into which Series B Preferred Stock is convertible.

Board and Observer Rights

The holders of Series B Preferred Stock are entitled to vote on all matters on which the holders of common stock are entitled to vote. The number of votes to which each holder of Series B Preferred Stock is entitled is equal to the number of shares of common stock that would be issued to such holder if the Series B Preferred Stock had been converted at the record date for the meeting of stockholders.

Pursuant to the Purchase Agreement, from and after the closing of the sale of the Series B Preferred Stock, Xmark Opportunity Fund, Ltd. and its affiliates (the "Xmark Entities"), will have the right to designate one member to the Company's Board of Directors. This right shall last until such time as the Xmark Entities no longer hold at least one-third of the Series B Preferred Stock issued to them at closing. In addition, the Xmark Entities and Caduceus Capital Master Fund Limited and its affiliates (together with the Xmark Entities, the "Lead Investors") will have the right to designate one observer to attend all meetings of the Company's Board of Directors, committees thereof and access to all information made available to members of the Board. This right shall last until such time as the Lead Investors no longer hold at least one-third of the Series B Preferred Stock issued to them. To date, a board member and board observer have not been designated. Pursuant to the agreement by holders of Series A Preferred to exchange their shares for shares of Series C Preferred Stock, as described above, the holders of the new Series C preferred stock gave up the right to nominate one person to the Company's Board of Directors, which right they previously held as holders of Series A preferred stock.

Common Stock Purchase Warrants

The common stock purchase warrants issued to investors are exercisable for an aggregate of 7,500,000 shares of the Company's common stock at an exercise price of \$1.25 per share and expire in May 2012. If after the first anniversary of the date of issuance of the warrant there is no effective registration statement registering, or no current prospectus available for, the resale of the shares issuable upon the exercise of the warrants, the holder may conduct a cashless exercise whereby the holder may elect to pay the exercise price by having the Company withhold, upon exercise, shares having a fair market value equal to the applicable aggregate exercise price. The warrant exercise price and/or number of warrants is subject to adjustment only for stock dividends, stock splits or similar capital reorganizations so that the rights of the warrant holders after such event will be equivalent to the rights of warrant holders prior to such event. If there is an effective registration statement covering the shares underlying the warrants and the VWAP, as defined in the warrant, of the Company's common stock exceeds \$2.25 for 20 consecutive trading days, then on the 31st day following the end of such period any remaining warrants for which a notice of exercise was not delivered shall no longer be exercisable and shall be converted into a right to receive \$.01 per share.

Registration Rights Agreement

The Company and the investors entered into a registration rights agreement which required the Company to file with the SEC no later than June 1, 2007, a registration statement covering the resale of a number of shares of common stock equal to 100% of the shares issuable upon conversion of the preferred stock and exercise of the warrants as of the date of filing of the registration statement. The registration rights agreement also required the registration statement to be declared effective by August 30, 2007 and requires the Company to use its best efforts to keep the registration statement continuously effective under the Securities Act until the earlier of the date when all securities covered by the registration statement have been sold or the second anniversary of the closing. In the event the registration statement was not declared effective within the timeframe specified by the Registration Rights Agreement or not maintained effective, the Company is required to pay to the investors liquidated damages equal to 1.5% per month (prorated on a daily basis for any period of less than a full month) of the aggregate purchase price of the preferred stock and warrants until the registration statement is declared effective. The Company is allowed to suspend the use of the registration statement for not more than 15 consecutive days or for a total of not more than 30 days in any 12-month period without incurring liability for the liquidated damages in certain circumstances.

The Company filed a registration statement covering 100% of the shares of common stock issuable on conversion of the preferred stock and exercise of the warrants (23,400,000 shares, including 900,000 shares underlying the common stock purchase warrants issued to placement agents) on May 25, 2007. The registration statement was thereafter amended to reduce the number of shares of common stock that may be resold under the registration statement to 80% of the shares issuable upon conversion of the preferred stock and none of the shares of common stock issuable upon exercise of the warrants. The holders of the Series B Preferred Stock consented to the filing of the amendment to the registration statement by which the number of shares of common stock covered by the registration statement was reduced from 23,400,000 shares to 12,000,000 shares. The holders of the Series B Preferred Stock also waived any liquidated damages arising under the registration rights agreement through September 7, 2007, as a result of such reduction in the number of shares registered, and by any failure to have the registration statement declared effective by the SEC prior to September 7, 2007. The registration statement, as amended, was declared effective on September 6, 2007.

After September 7, 2007 the Company may be required to pay to the investors any liquidated damages due as a result of the failure to (i) register 100% of the shares of common stock issuable upon conversion of the preferred stock and exercise of the warrants and (ii) keep the registration statement continuously effective. In the year ended December 31, 2007, the Company accrued \$395,500 for potential liquidated damages. This amount is included in general and administrative expenses and represents an estimate of the probable pro rata portion due to investors as a result of registering 53%, instead of 100%, of the total shares underlying the preferred stock and warrants held by the investors. As of the date of this filing, no claim has been made for payment of any liquidated damages.

Placement Agent Agreement

Upon the closing of the preferred stock and warrant financing the Company paid a cash placement agent fee to Rodman & Renshaw LLC (“Rodman”) and Rodman’s subagent totaling \$1,050,000 and issued Rodman and the subagent warrants to purchase a total of 900,000 shares of common stock with the same terms as the warrants issued to the investors.

The Company has agreed to indemnify Rodman from claims arising in relation to the services it provided to the Company in connection with this agreement.

Accounting Treatment

The terms of the Series B Preferred Stock contain provisions that allow the holders to elect to receive a liquidation payment in circumstances that are beyond the Company’s control. Therefore the shares have been recorded as redeemable preferred stock outside of permanent equity in the balance sheet as of December 31, 2007. The shares were initially recorded at their estimated as-converted fair value of \$19,050,000, net of cash issuance costs of \$1,306,949. The Company has concluded that since it is not probable that an event will occur that would allow the holders to elect to receive a liquidation payment, the carrying value will not be adjusted until the time that such event becomes probable. The liquidation preference (redemption value) is \$15,337,500 at December 31, 2007.

Since the conversion price of the preferred stock was less than the market value of the Company’s common stock at the time of the closing, the Company determined that there was a beneficial conversion feature (“BCF”). After allocating the relative fair value of the warrants issued to investors of \$3,774,385 to paid-in-capital, the intrinsic value of the BCF was determined to be \$7,824,385. Since the Series B Preferred Stock was immediately convertible, the BCF was recorded as a deemed dividend in the quarter ended June 30, 2007. The fair value of the warrants issued to placement agents at the date of issuance, calculated using the Black-Scholes valuation method, was \$768,821 and was recorded as a component of permanent equity with an offsetting reduction in permanent equity to record the issuance cost. The valuation was based on estimated volatility of 80%, a discount rate of 4.55%, and a term of 5 years.

Series C Preferred - As a condition to closing of the sale of Series B Preferred Stock described above, the Company entered into an agreement to exchange and consent with the holders of the Series A Preferred Stock. Pursuant to that agreement, the holders of the Series A Preferred Stock exchanged their 3,264 shares of Series A Preferred Stock for 272 shares of a new Series C convertible preferred stock (“Series C Preferred Stock”), which are subordinated to the Series B Preferred Stock as set forth in the Series C Certificate of Designations. The Series C Preferred Stock is convertible at \$1.00 per share into 3,264,000 shares of common stock. As part of the exchange, the Company issued to the holders of the Series A Preferred Stock warrants to purchase 1,333,333 shares of common stock expiring on May 2, 2012 at a price of \$1.25 per share; paid them a cash allowance to defray expenses totaling \$40,000; and paid them an amount equal to unpaid dividends accumulated through the date of the exchange. The fair value of the warrants at the date of issuance calculated using the Black-Scholes valuation method was \$1,138,698. The valuation was based on estimated volatility of 80%, a discount rate of 4.55%, and a term of 5 years. The total of the fair value of the warrants and the cash payment of \$40,000 has been reflected as a deemed dividend to preferred stockholders in the statement of operations. Pursuant to the exchange agreement, the holders of the Series C preferred stock retained registration and related rights substantially identical to the rights that they had as holders of the Series A Preferred Stock.

The Series C Preferred stockholders do not have voting rights. The Series C Preferred Stock has an annual dividend rate of 8% until October 1, 2008 and thereafter has an annual dividend rate of 20%. The dividend rate also increases to 20% upon certain events of default as defined in the Series C Certificate of Designations. The dividends are payable quarterly commencing on June 30, 2007. Such dividends shall be paid only after all outstanding dividends on the Series B Preferred Stock (with respect to the current fiscal year and all prior fiscal years) shall have been paid to the holders of the Series B Preferred Stock. During 2007, the Company declared and paid dividends totaling \$173,355 (\$637 per share) to Series C preferred stockholders. The conversion price is subject to adjustment for stock dividends, stock splits or similar capital reorganizations. The Series C Preferred Stock is redeemable only at the option of the Company upon 30 days’ notice at a 20% premium plus any accrued but unpaid dividends. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company’s affairs, the Series C Preferred stock will be treated as senior to Novelos common stock. After all required payments are made to holders of Series B Preferred Stock, the Series C Preferred stockholders will be entitled to receive first, \$12,000 per share and all accrued and unpaid dividends. If, upon any winding up of the Company’s affairs, the Company’s remaining assets available to pay the holders of Series C preferred stock are not sufficient to permit the payment in full, then all of the Company’s assets will be distributed to the holders of Series C preferred stock (and any remaining holders of Series B preferred stock as may be required) on a pro rata basis.

Common Stock Warrants — The following table summarizes information with regard to outstanding warrants issued in connection with equity and debt financings as of December 31, 2007:

Offering	Outstanding (as adjusted)	Exercise Price (as adjusted)	Expiration Date
2005 Bridge Loans	720,000	\$ 0.625	April 1, 2010
2005 PIPE:			
Investors	4,500,000	\$ 1.00	August 9, 2008
Placement agents and finders	680,000	\$ 1.00	August 9, 2010
Series A Preferred (1):			
Investors - September 30, 2005 closing	909,090	\$ 1.00	September 30, 2010
Investors - October 3, 2005 closing	60,606	\$ 1.00	October 3, 2010
2006 PIPE:			
Investors	9,509,275	\$ 2.20	March 7, 2011
Placement agents	760,743	\$ 2.20	March 7, 2011
Series B Preferred:			
Investors	7,500,000	\$ 1.25	May 2, 2012
Placement agents	900,000	\$ 1.25	May 2, 2012
Series C Exchange	1,333,333	\$ 1.25	May 2, 2012
Total	26,873,047		

(1) Concurrently with the Series B Financing, the shares of Series A Preferred Stock were exchanged for shares of Series C Preferred Stock.

On April 1, 2005, in connection with the issuance of \$450,000 bridge notes payable, the Company issued warrants to purchase 720,000 shares of Novelos stock at \$0.625 per share that are exercisable through April 1, 2010.

No warrants have been exercised as of December 31, 2007.

Reserved Shares — The following shares were reserved for future issuance upon exercise of stock options or warrants or conversion of preferred stock as of the dates indicated:

	December 31,	
	2007	2006
2000 Stock Option Plan	73,873	73,873
2006 Stock Incentive Plan	2,220,000	5,000,000
Options issued outside of formalized plans	2,553,778	2,578,778
Warrants	28,973,047(1)	16,820,135
Preferred stock	22,014,000(1)	2,696,283
Total shares reserved for future issuance	55,834,698	27,169,069

(1) The amount of reserved shares includes shares reserved in excess of the number currently exercisable or convertible in accordance with the related financing agreements.

Authorized Shares — On July 16, 2007, the Company's shareholders approved and the Company filed an amendment to the articles of incorporation to increase the authorized shares of common stock from 100,000,000 to 150,000,000.

5. COLLABORATION AGREEMENT

In December 2007 the Company entered into a Collaboration Agreement with Lee's Pharmaceutical (HK) Ltd ("Lee's Pharma"). Pursuant to the agreement Lee's Pharma obtained an exclusive license to develop, manufacture and commercialize NOV-002 and NOV-205 in Hong Kong, Macau, China and Taiwan (the "territory"). Under the terms of the agreement the Company will receive an upfront license fee of \$500,000 in 2008 and is entitled to receive up to \$1,700,000 in future milestone payments upon the completion of development and marketing milestones by Lee's Pharma. Additionally the Company will receive royalty payments of 20-25% of net sales of NOV-002 in the territory and will receive royalty payments of 12%-15% of net sales of NOV-205 in the territory. Lee's Pharma will also reimburse the Company for the manufacturing cost of pharmaceutical products provided to Lee's Pharma in connection with the agreement. Lee's Pharma has committed to spending certain minimum amounts on development in the first 4 years of the agreement. The agreement expires upon the expiration of the last patent covering any of the licensed products, or twelve years from the date of the first commercial sale in China; whichever is longer.

6. STOCK-BASED COMPENSATION

The Company's stock-based compensation plans are summarized below:

2000 Stock Option Plan. The Company's stock option plan established in August 2000 (the "2000 Plan") provides for grants of options to purchase up to 73,873 shares of common stock. Grants may be in the form of incentive stock options or nonqualified options. The board of directors determines exercise prices and vesting periods on the date of grant. Options generally vest annually over three years and expire on the tenth anniversary of the grant date. No options were granted, exercised or canceled under the 2000 Plan during 2005, 2006 or 2007.

2006 Stock Incentive Plan. On May 1, 2006, the Company's board of directors adopted and on July 21, 2006 the Company's stockholders approved, the 2006 Stock Incentive Plan (the "2006 Plan"). A total of 5,000,000 shares of common stock are reserved for issuance under the 2006 Plan for grants of incentive or nonqualified stock options, rights to purchase restricted and unrestricted shares of common stock, stock appreciation rights and performance share grants. A committee of the board of directors determines exercise prices, vesting periods and any performance requirements on the date of grant, subject to the provisions of the 2006 Plan. Options are granted at or above the fair market value of the common stock at the grant date and expire on the tenth anniversary of the grant date. Vesting periods are generally two to three years. In the years ended December 31, 2007 and 2006, stock options for the purchase of 1,380,000 and 840,000 shares of common stock, respectively, were granted under the 2006 Plan. There have been no exercises or cancellations of options under the 2006 Plan. Options granted pursuant to the 2006 Stock Incentive Plan generally will become fully vested upon a termination event occurring within one year following a change in control, as defined. A termination event is defined as either termination of employment other than for cause or constructive termination resulting from a significant reduction in either the nature or scope of duties and responsibilities, a reduction in compensation or a required relocation.

Other Stock Option Activity. During 2005 and 2004, the Company issued a total of 2,653,778 stock options to employees, directors and consultants outside of any formalized plan. These options are exercisable within a ten-year period from the date of grant, and vest at various intervals with all options being fully vested within two to three years of the grant date. The options are not transferable except by will or domestic relations order. The option price per share is not less than the fair market value of the shares on the date of the grant. During the years ended December 31, 2007 and 2006, options to purchase 25,000 and 75,000 shares, respectively, were exercised.

Adoption of SFAS No. 123(R)

The Company accounts for employee stock-based compensation in accordance with SFAS 123R, using the modified-prospective-transition method. SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values. The Company accounts for non-employee stock-based compensation in accordance with Emerging Issues Task Force (EITF) No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*. EITF 96-18 requires that companies recognize compensation expense based on the estimated fair value of options granted to non-employees over their vesting period, which is generally the period during which services are rendered by such non-employees.

Under the modified-prospective-transition method, compensation cost recognized for the years ended December 31, 2007 and 2006 includes: (a) compensation cost for all stock-based payments granted, but not yet vested as of January 1, 2006, based on the grant-date fair value estimated in accordance with the original provisions of SFAS 123, and (b) compensation cost for all stock-based payments granted subsequent to January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123R.

The following table summarizes amounts charged to expense for stock-based compensation related to employee and director stock option grants and stock-based compensation recorded in connection with stock options and restricted stock awards granted to non-employee consultants:

	Year Ended December 31,	
	2007	2006
Employee and director stock option grants:		
Research and development	\$ 163,558	\$ 77,333
General and administrative	179,675	190,948
	<u>343,233</u>	<u>268,281</u>
Non-employee consultants stock option grants and restricted stock awards:		
Research and development	17,233	11,435
General and administrative	142,824	308,327
	<u>160,057</u>	<u>319,762</u>
Total stock-based compensation	<u>\$ 503,290</u>	<u>\$ 588,043</u>

Determining Fair Value

Valuation and amortization method. The fair value of each stock award is estimated on the grant date using the Black-Scholes option-pricing model. The estimated fair value of employee stock options is amortized to expense using the straight-line method over the vesting period.

Volatility. Volatility is determined based on the Company's estimate of fluctuation in its common stock price and its review of comparable public company data due to the limited amount of time that the Company's common stock has been publicly traded.

Risk-free interest rate. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant commensurate with the expected term assumption.

Expected term. The expected term of stock options granted is based on the Company's estimate of when options will be exercised in the future as there have been limited stock option exercises to date. The expected term is generally applied to one group as a whole as the Company does not expect substantially different exercise or post-vesting termination behavior within its employee population.

Forfeitures. As required by SFAS 123R, the Company records stock-based compensation expense only for those awards that are expected to vest. SFAS 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The term "forfeitures" is distinct from "cancellations" or "expirations" and represents only the unvested portion of the surrendered option. The Company has applied an annual forfeiture rate of 0% to all unvested options as of December 31, 2007 as the Company has experienced very few forfeitures to date and believes that there is insufficient history to develop an accurate estimate of future forfeitures. This analysis will be re-evaluated quarterly and the forfeiture rate will be adjusted as necessary. Ultimately, the actual expense recognized over the vesting period will be for only those shares that vest.

The following table summarizes weighted average values and assumptions used for options granted to employees, directors and consultants in the periods indicated:

	Year Ended December 31,	
	2007	2006
Volatility	80%	80%
Weighted-average volatility	80%	80%
Risk-free interest rate	3.57%-4.66%	4.50%-5.05%
Expected life (years)	5	5
Dividend	0	0
Weighted-average exercise price	\$ 0.57	\$ 0.99
Weighted-average grant-date fair value	\$ 0.38	\$ 0.62

Stock Option Activity

A summary of stock option activity under the 2000 Plan, the 2006 Plan and outside of any formalized plan is as follows:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contracted Term in Years	Aggregate Intrinsic Value
Outstanding at January 1, 2006	2,727,651	\$ 0.60	8.9	\$ 4,294,257
Options granted	840,000	\$ 0.99		
Options exercised	(75,000)	\$ 0.01		
Outstanding at December 31, 2006	3,492,651	\$ 0.70	8.4	\$ 1,773,777
Options granted	1,380,000	\$ 0.57		
Options exercised	(25,000)	\$ 0.01		
Outstanding at December 31, 2007	4,847,651	\$ 0.67	8.1	\$ 1,308,961
Exercisable at December 31, 2007	3,125,978	\$ 0.68	7.3	\$ 1,177,066

The aggregate intrinsic value of options outstanding is calculated based on the positive difference between the closing market price of the Company's common stock at the end of the respective period and the exercise price of the underlying options. During the year ended December 31, 2007 and 2006, the total intrinsic value of options exercised was \$18,750 and \$134,250, respectively and the total amount of cash received from exercise of these options was \$250 and \$750, respectively.

As of December 31, 2007 there was approximately \$643,000 of total unrecognized compensation cost related to unvested share-based compensation arrangements. Of this total amount, 51%, 35% and 14% is expected to be recognized during 2008, 2009 and 2010, respectively. The Company expects 1,721,673 in unvested options to vest in the future. The weighted average grant date fair value of vested and unvested options outstanding at December 31, 2007 was \$0.39 and \$0.41, respectively. The weighted average grant date fair value of vested and unvested options outstanding at December 31, 2006 was \$0.23 and \$0.79, respectively. The fair value of options that vested during the years ended December 31, 2007 and 2006 was approximately \$701,267 and \$415,000, respectively.

On January 2, 2008, options to purchase 40,000 shares of our common stock were granted to each of our six non-employee directors and options to purchase a total of 95,000 shares of our common stock to consultants. The director and consultant grants were granted at the closing price of our common stock on that day. These options vest on a quarterly basis over a two-year period. On January 16, 2008, an option to purchase 100,000 shares was exercised by one of our directors for total consideration of \$1,000.

7. INCOME TAXES

The Company's deferred tax assets consisted of the following at December 31:

	<u>2007</u>	<u>2006</u>
Net operating loss carryforwards	\$ 4,547,000	\$ 3,700,000
Research and development expenses	9,718,000	3,581,000
Tax credits	1,880,000	550,000
Capital loss carryforward	403,000	403,000
Stock-based compensation	375,000	
Gross deferred tax asset	16,923,000	8,234,000
Valuation allowance	(16,923,000)	(8,234,000)
Net deferred tax asset	<u>\$ —</u>	<u>\$ —</u>

As of December 31, 2007, the Company had federal and state net operating loss carryforwards of approximately \$13,198,000 and \$7,031,000 respectively, which expire through 2027. In addition, the Company has federal and state research and development and investment tax credits of approximately \$1,292,000 and \$892,000, respectively which expire through 2027. The amount of net operating loss carryforwards which may be utilized annually in future periods may be limited pursuant to Section 382 of the Internal Revenue Code as a result of substantial changes in the Company's ownership that have occurred or that may occur in the future.

The capital loss carryforward relates to the loss recorded in prior years for Novelos' investment in an unrelated company.

Because of the Company's limited operating history, continuing losses and uncertainty associated with the utilization of the net operating loss carryforwards in the future, management has provided a 100% allowance against the Company's gross deferred tax asset. In both 2007 and 2006, the increase in the valuation allowance represents the principal difference between the Company's total statutory tax rate of approximately 40% and its effective rate of 0%.

In June 2006, the Financial Accounting Standards Board ("FASB") issued FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes—an Interpretation of FASB Statement No. 109" ("FIN No. 48"), which clarifies the accounting for uncertainty in income tax positions. This interpretation requires that the Company recognize in its financial statements the impact of a tax position if that position is more likely than not of being sustained on audit, based on the technical merits of the position. The provisions of FIN No. 48 are effective for financial statements for fiscal years beginning after December 15, 2006. The cumulative effect of applying the provisions of FIN No. 48, if any, are required to be recorded as an adjustment to accumulated deficit. The Company adopted FIN No. 48 effective January 1, 2007. Upon adoption, there was no adjustment to accumulated deficit as the Company had no unrecognized tax benefits, and there were no accrued interest or penalties related to tax contingencies.

The Company did not have any unrecognized tax benefits or accrued interest and penalties at any time during the year ended December 31, 2007, and does not anticipate having any unrecognized tax benefits over the next twelve months. The Company is subject to audit by the IRS for tax periods commencing January 1, 2004.

8. NET LOSS PER SHARE

Basic net loss per share is computed by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding during the period. Diluted net loss per share is computed by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock and the dilutive potential common stock equivalents then outstanding. Potential common stock equivalents consist of stock options, warrants and convertible preferred stock. Since the Company has a net loss for all periods presented, the inclusion of stock options and warrants in the computation would be antidilutive. Accordingly, basic and diluted net loss per share are the same.

The following potentially dilutive securities have been excluded from the computation of diluted net loss per share since their inclusion would be antidilutive:

	Year Ended December 31,	
	2007	2006
Stock options	4,847,651	3,492,651
Warrants	26,873,047	14,561,449
Conversion of preferred stock	18,264,000	2,417,774

9. COMMITMENTS

On May 25, 2007, the Company entered into a twenty-six-month lease for office space, commencing July 1, 2007. Monthly rent is \$7,175 per month for the first two months and \$7,675 per month for the remaining 24 months. Rent expense was \$81,450 and \$62,625 the years ended December 31, 2007 and 2006, respectively. Future minimum lease payments under this non-cancelable lease are \$92,100 in 2008 and \$61,400 in 2009.

The Company is obligated to ZAO BAM under a royalty and technology transfer agreement. Mark Balazovsky, a director of the Company until November 2006, is the majority shareholder of ZAO BAM. Pursuant to the royalty and technology transfer agreement between the Company and ZAO BAM, the Company is required to make royalty payments of 1.2% of net sales of oxidized glutathione-based products. The Company is also required to pay ZAO BAM \$2 million for each new oxidized glutathione-based drug within eighteen months following FDA approval of such drug.

If a royalty is not being paid to ZAO BAM on net sales of oxidized glutathione products, then the Company is required to pay ZAO BAM 3% of all license revenues. If license revenues exceed the Company's cumulative expenditures including, but not limited to, preclinical and clinical studies, testing, FDA and other regulatory agency submission and approval costs, general and administrative costs, and patent expenses, then the Company would be required to pay ZAO BAM an additional 9% of the amount by which license revenues exceed the Company's cumulative expenditures.

As a result of the assignment to Novelos of the exclusive worldwide intellectual property and marketing rights of oxidized glutathione (excluding Russia and the other states of the former Soviet Union), Novelos is obligated to the Oxford Group, Ltd. for future royalties. One of the Company's directors is president of Oxford Group, Ltd. Pursuant to the agreement, as revised May 26, 2005, Novelos is required to pay Oxford Group, Ltd. a royalty in the amount of 0.8% of the Company's net sales of oxidized glutathione-based products.

In July, 2006, the Company entered into a contract with a supplier of pharmaceutical products that will provide chemotherapy drugs to be used in connection with Phase 3 clinical trial activities outside of the United States. Pursuant to the contract, the Company was obligated to purchase a minimum of approximately \$2,600,000 of chemotherapy drugs at specified intervals through March 2008. In October 2007, the Company amended the contract to increase its remaining purchase commitment from \$135,000 to approximately \$2,000,000 through January 2008. As of December 31, 2007, approximately \$1,000,000 is remaining under that commitment. In connection with that agreement, the Company was required to enter into a standby letter of credit arrangement with a bank, originally expiring in August 2007 and renewed through March 2008. The balance on the standby letter of credit at December 31, 2007 equals the remaining purchase commitment of \$1,000,000. In connection with the letter of credit, the Company has pledged cash of approximately \$1,185,000 to the bank as collateral on the letter of credit. The pledged cash is reflected as restricted cash on the balance sheet.

On July 15, 2005, the Company entered into an employment agreement with Christopher J. Pazoles, whereby he agreed to serve as the Company's vice president of research and development for an initial term of two years. The agreement is automatically renewed for one-year terms unless 60-day notice is provided by either party. The agreement has been renewed for an additional one year term in accordance with its terms. The agreement provides for a minimum salary of \$195,000 during the current and any future terms as well as participation in standard benefit programs. The agreement further provides that upon resignation for good reason or termination without cause, both as defined, Dr. Pazoles will receive his base salary for the remainder of the contract term. In addition, his benefits will be paid for the following twelve months.

The Company entered into an employment agreement with Harry Palmin effective January 1, 2006, whereby he agreed to serve as the Company's president and chief executive officer for an initial term of two years. The agreement is automatically renewed for one-year terms unless 90-day notice is provided by either party. The agreement has been renewed for an additional one-year term in accordance with its terms. The agreement provides for an initial salary of \$225,000, participation in standard benefit programs and an annual cash bonus at the discretion of the compensation committee. The agreement further provides that upon resignation for good reason or termination without cause, both as defined, Mr. Palmin will receive his pro rata share of the average of his annual bonus paid during the two fiscal years preceding his termination; his base salary and benefits for 11 months after the date of termination and fifty percent of his unvested stock options will vest. The agreement also contains a non-compete provision, which prohibits Mr. Palmin from competing with the Company for one year after termination of his employment with the Company.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 24. Indemnification of Directors and Officers.

Section 102(b)(7) of the Delaware General Corporation Law allows us to adopt a charter provision eliminating or limiting the personal liability of directors to us or our stockholders for breach of fiduciary duty as directors, but the provision may not eliminate or limit the liability of directors for (a) any breach of the director's duty of loyalty to us or our stockholders, (b) any acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) unlawful payments of dividends or unlawful stock repurchases or redemptions under Section 174 of the Delaware General Corporation Law or (d) any transaction from which the director derived an improper personal benefit. Article Seventh of our charter provides that none of our directors shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, subject to the limitations imposed by Section 102(b)(7). Article Seventh also provides that no amendment to or repeal of Article Seventh shall apply to or have any effect on the liability or the alleged liability of any director with respect to any acts or omissions of such director occurring prior to such amendment or repeal. A principal effect of Article Seventh is to eliminate or limit the potential liability of our directors for monetary damages arising from breaches of their duty of care, unless the breach involves one of the four exceptions described in (a) through (d) above.

Section 145 of the Delaware General Corporation Law provides, in general, that a corporation incorporated under the laws of the State of Delaware, such as us, may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than a derivative action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. In the case of a derivative action, a Delaware corporation may indemnify any such person against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification will be made in respect of any claim, issue or matter as to which such person will have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery of the State of Delaware or any other court in which such action was brought determines such person is fairly and reasonably entitled to indemnity for such expenses.

Article Eighth of our amended and restated certificate of incorporation and Section 5.1 of our bylaws provide that we will indemnify our directors, officers, employees and agents to the extent and in the manner permitted by the provisions of the Delaware General Corporation Law, as amended from time to time, subject to any permissible expansion or limitation of such indemnification, as may be set forth in any shareholders' or directors' resolution or by contract.

The effect of these provisions would be to permit indemnification by us for, among other liabilities, liabilities arising out of the Securities Act of 1933.

Item 25. Other Expenses of Issuance and Distribution

The following table provides information regarding the various actual and anticipated expenses payable by us in connection with the issuance and distribution of the securities being registered. We are paying the expenses incurred in registering the shares, but all selling and other expenses incurred by the selling stockholders will be borne by the selling stockholders. All amounts shown are estimates except the Securities and Exchange Commission registration fee.

Nature of Expense	Amount
SEC registration fee	\$ 2,804
Accounting fees and expenses	20,000
Legal fees and expenses	50,000
Printing and related fees	10,000
Miscellaneous	10,000
Total	<u>\$ 92,804</u>

Item 26. Sales of Unregistered Securities

Since January 2005, we have sold the following securities in reliance on one or more exemptions from registration under the Securities Act of 1933, as amended, including the exemption under Section 4(2) thereof:

2008

On January 16, 2008, we issued 100,000 shares of our common stock to Howard Schneider, one of our directors, upon the exercise of his stock option at a price of \$0.01 per share for total consideration of \$1,000, pursuant to an option granted in February 2005.

On April 11, 2008, we issued 113.5 shares of our Series D convertible preferred stock and warrants to purchase 4,365,381 shares of our common stock to institutional investors. We received gross proceeds of \$5,675,000 and paid approximately \$200,000 in fees and expenses. In connection with this transaction, 300 shares of Series B convertible preferred stock were exchanged for 300 shares of Series D convertible preferred stock.

2007

On May 2, 2007, we issued 300 shares of our Series B convertible preferred stock and warrants to purchase 7,500,000 shares of our common stock to institutional investors. We received gross proceeds of \$15,000,000 and paid approximately \$1,300,000 in fees and expenses. We also issued warrants to purchase 900,000 shares of our common stock to Rodman & Renshaw LLC and VFT Special Ventures, Ltd. (an affiliate of Emerging Growth Equities) as partial consideration for their placement agent services in connection with the financing.

On July 6, 2007 we issued 25,000 shares of our common stock to Dr. Kenneth Tew, the chairman of our Scientific Advisory Board, upon exercise of his stock option at a price per share of \$0.01 for total consideration of \$250, pursuant to an option granted in April 2004.

2006

On March 7, 2006, we issued 11,154,073 shares of our common stock and warrants to purchase 8,365,542 shares of our common stock to 39 accredited investors. We received gross proceeds of \$15,058,005 and paid approximately \$1,100,000 in fees and expenses.

During 2006, we issued a total of 85,000 shares of our common stock to investor relations consultants as compensation for services on the following dates and in the following amounts: January 23, 2006 20,000 shares; February 27, 2006 15,000 shares; February 28, 2006 20,000 shares; March 28, 2006 10,000 shares; June 22, 2006 10,000 shares; September 22, 2006 10,000 shares.

On March 27, 2006 we issued 75,000 shares of our common stock to Dr. Kenneth Tew, a member of our Scientific Advisory Board, upon exercise of his stock option at a price per share of \$0.01 for total consideration of \$750, pursuant to an option granted in April 2004.

2005

In January 2005, we issued a 6% promissory note in the principal amount of \$400,000 to an accredited investor. We also issued 10,000,000 shares of our common stock to this accredited investor (and other accredited investors) as partial consideration for this loan, a 6% promissory note issued in December 2004 in the principal amount of \$100,000 and a commitment to provide additional financing of up to \$500,000 through August 2005.

On April 1, 2005, we issued three promissory notes to accredited investors in the aggregate principal amount of \$450,000. We also issued these accredited investors warrants to purchase an aggregate of 720,000 shares of our common stock. These holders of our promissory notes converted them into units on May 27, 2005 as described below.

On May 26, 2005, we issued 586,351 shares of our common stock, with an aggregate deemed value of \$732,941, and \$318,713 in cash to holders of our promissory notes in exchange for the forgiveness of indebtedness in the amount of \$3,139,185, which resulted in forgiveness of debt income of \$2,087,531.

On May 26, 2005, we issued 1,760,000 shares of our common stock to holders of our convertible promissory notes in the aggregate principal amount of \$1,100,000.

On May 26, 2005, we issued 2,016,894 shares of our common stock to the Oxford Group, Ltd, including 907,602 shares to each of two of our directors (one of whom has since resigned), in consideration for an amendment to an arrangement for future royalty payments.

On May 27, 2005, June 29, 2005, July 29, 2005 and August 9, 2005, we issued an aggregate of 200 units, each unit initially consisting of 20,000 shares of our common stock and warrants to purchase 10,000 shares of our common stock, in private placement transactions to accredited investors. Holders of \$550,000 of our convertible debt converted debt into 22 of the 200. We received net cash proceeds of \$3,715,000. We paid commissions and finders fees consisting of \$461,000 and warrants to purchase an aggregate of 412,112 shares of our common stock. vFinance Investments, Inc. and Mercer Capital, Ltd. acted as placement agents on a best efforts basis. Of the \$461,000 paid in commissions and finders fees, we paid vFinance Investments, Inc. and Mercer Capital Ltd. \$292,500. We also issued 125,000 shares of our common stock and warrants to purchase an aggregate of 264,236 shares of our common stock to vFinance Investments, Inc. and Mercer Capital Ltd. as consideration for placement services rendered in connection with these private placements.

On September 30, 2005 and October 3, 2005, we issued an aggregate of 3,200 shares of our Series A 8% cumulative convertible preferred stock and warrants to purchase an aggregate of 969,696 shares of our common stock to institutional investors. We received gross proceeds of \$3,200,000 and paid \$336,000 in fees and expenses.

On October 20, 2005 we issued a total of 55,000 unregistered shares of our common stock to investor relations consultants as compensation for services.

Item 27. Exhibits

Exhibit No.	Description	Filed with this Form SB-2	Incorporated by Reference		Exhibit No.
			Form	Filing Date	
2.1	Agreement and plan of merger among Common Horizons, Inc., Nove Acquisition, Inc. and Novelos Therapeutics, Inc. dated May 26, 2005		8-K	June 2, 2005	99.2
2.2	Agreement and plan of merger between Common Horizons and Novelos Therapeutics, Inc. dated June 7, 2005		10-QSB	August 15, 2005	2.2

Exhibit No.	Description	Filed with this Form SB-2	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
3.1	Amended and Restated Certificate of Incorporation filed as Exhibit A to the Certificate of Merger merging Nove Acquisition, Inc. with and into Novelos Therapeutics, Inc. dated May 26, 2005		10-QSB	August 10, 2007	3.1
3.2	Certificate of Merger merging Common Horizons, Inc. with and into Novelos Therapeutics, Inc. dated June 13, 2005		10-QSB	August 10, 2007	3.2
3.3	Certificate of Correction dated March 3, 2006		10-QSB	August 10, 2007	3.3
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation dated July 16, 2007		10-QSB	August 10, 2007	3.4
3.5	Certificate of Designations of Series B convertible preferred stock		10-QSB	August 10, 2007	3.5
3.6	Certificate of Designations of Series C cumulative convertible preferred stock		10-QSB	August 10, 2007	3.6
3.7	Certificate of Designations of Series D convertible preferred stock		8-K	April 14, 2008	4.1
3.8	Certificate of Elimination Series A 8% Cumulative Convertible Preferred Stock of Novelos Therapeutics, Inc.		8-K	April 14, 2008	4.2
3.9	By-laws		8-K	June 17, 2005	2
5.1	Legal Opinion of Foley Hoag LLP		SB-2	May 25, 2007	5.1
10.1 **	Employment agreement with Christopher J. Pazoles dated July 15, 2005		10-QSB	August 15, 2005	10.4
10.2 **	Employment Agreement with Harry S. Palmin dated January 31, 2006		8-K	February 6, 2006	99.1
10.3 **	Compensation for independent directors		8-K	December 22, 2006	99.1
10.4**	2000 Stock Option and Incentive Plan		SB-2	November 16, 2005	10.2
10.5 **	Form of 2004 non-plan non-qualified stock option		SB-2	November 16, 2005	10.3
10.6 **	Form of non-plan non-qualified stock option used from February to May 2005		SB-2	November 16, 2005	10.4
10.7 **	Form of non-plan non-qualified stock option used after May 2005		SB-2	November 16, 2005	10.5
10.8	Form of common stock purchase warrant issued in March 2005		SB-2	November 16, 2005	10.6
10.9	Form of securities purchase agreement dated May 2005		8-K	June 2, 2005	99.1

Exhibit No.	Description	Filed with this Form SB-2	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
10.11	Form of Class A common stock purchase warrant dated September 30, 2005		8-K	October 3, 2005	99.3
10.12	Form of share escrow agreement		8-K	November 3, 2005	10.3
10.13	Consideration and new technology agreement dated April 1, 2005 with ZAO BAM		10-QSB	August 15, 2005	10.2
10.14	Letter agreement dated March 31, 2005 with The Oxford Group, Ltd.		10-QSB	August 15, 2005	10.3
10.15	Form of securities purchase agreement dated March 2, 2006		8-K	March 3, 2006	99.2
10.16	Form of common stock purchase warrant dated March 2006		8-K	March 3, 2006	99.3
10.17	Placement Agent Agreement with Oppenheimer & Co. Inc. dated December 19, 2005		8-K	March 3, 2006	99.4
10.18**	2006 Stock Incentive Plan		10-QSB	November 6, 2006	10.1
10.19	Form of Incentive Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.1
10.20	Form of Non-Statutory Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.2
10.21	Form of Non-Statutory Director Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.3
10.22	Securities Purchase Agreement dated April 12, 2007		10-QSB	May 8, 2007	10.1
10.23	Letter Amendment dated May 2, 2007 to the Securities Purchase Agreement		10-QSB	May 8, 2007	10.2
10.24	Registration Rights Agreement dated May 2, 2007		10-QSB	May 8, 2007	10.3
10.25	Placement Agent Agreement with Rodman & Renshaw, LLC dated February 12, 2007		10-QSB	May 8, 2007	10.4
10.26	Agreement to Exchange and Consent dated May 1, 2007		10-QSB	May 8, 2007	10.5
10.27	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Securities Purchase Agreement dated April 12, 2007		10-QSB	May 8, 2007	4.1

Exhibit No.	Description	Filed with this Form SB-2	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
10.28	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Agreement to Exchange and Consent dated May 2, 2007		10-QSB	May 8, 2007	4.2
10.29	Securities Purchase Agreement dated March 26, 2008		8-K	April 14, 2008	10.1
10.30	Amendment to Securities Purchase Agreement dated April 9, 2008		8-K	April 14, 2008	10.2
10.31	Registration Rights Agreement dated April 11, 2008		8-K	April 14, 2008	10.3
10.32	Form of Common Stock Purchase Warrant dated April 11, 2008 issued pursuant to the Securities Purchase Agreement dated March 26, 2008		8-K	April 14, 2008	4.3
10.33	Warrant Amendment Agreement dated April 11, 2008		8-K	April 14, 2008	10.5
10.34	Amendment to Registration Rights Agreement dated April 11, 2008		8-K	April 14, 2008	10.4
23.1	Consent of Foley Hoag (included in Exhibit 5.1)		SB-2	May 25, 2007	5.1
23.2	Consent of Stowe & Degon	X			
23.3	Power of Attorney (included on signature page)		SB-2	May 25, 2007	

** Management contract or compensatory plan.

Item 28. Undertakings.

(a) The undersigned registrant hereby undertakes to:

(1) File, during any period in which it offers or sells securities, a post-effective amendment to this Registration Statement to:

(i) Include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) Reflect in the prospectus any facts or events which, individually or together, represent a fundamental change in the information in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement.

(iii) Include any additional or changed material information on the plan of distribution.

(2) For determining liability under the Securities Act, treat each post-effective amendment as a new registration statement of the securities offered, and the offering of the securities at that time to be the initial bona fide offering.

(3) File a post-effective amendment to remove from registration any of the securities that remain unsold at the end of the offering.

(4) For determining liability of the undersigned small business issuer under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned small business issuer undertakes that in a primary offering of securities of the undersigned small business issuer pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned small business issuer will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned small business issuer relating to the offering required to be filed pursuant to Rule 424 (§230.424 of this chapter);

(ii) Any free-writing prospectus relating to the offering prepared by or on behalf of the undersigned small business issuer or used or referred to by the undersigned small business issuer;

(iii) The portion of any other free-writing prospectus relating to the offering containing material information about the undersigned small business issuer or its securities provided by or on behalf of the undersigned small business issuer; and

(iv) Any other communication that is an offer in the offering made by the undersigned small business issuer to the purchaser.

(b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the “Act”) may be permitted to directors, officers and controlling persons of the small business issuer pursuant to foregoing provisions, or otherwise, the small business issuer has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable.

(c) Each prospectus filed pursuant to Rule 424(b)(§230.424(b) of this chapter) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A (§230.430A of this chapter), shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

SIGNATURES

In accordance with the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements of filing on Form S-1 and authorized this post-effective amendment to the registration statement to be signed on its behalf by the undersigned, in the City of Newton, Commonwealth of Massachusetts, on April 16, 2008.

NOVELOS THERAPEUTICS, INC.

By: /s/ Harry S. Palmin

President and Chief Executive Officer

In accordance with the requirements of the Securities Act of 1933, this post-effective amendment to the registration statement was signed by the following persons in the capacities and on the dates stated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Harry S. Palmin</u> Harry S. Palmin	Chief Executive Officer and Director <i>(principal executive officer)</i>	April 16, 2008
<u>/s/ Joanne M. Protano</u> Joanne M. Protano	Chief Financial Officer <i>(principal financial officer and principal accounting officer)</i>	April 16, 2008
<u>Stephen A. Hill</u>	Chairman of the Board of Directors	
<u>/s/ Michael J. Doyle*</u> Michael J. Doyle	Director	April 16, 2008
<u>/s/ Sim Fass*</u> Sim Fass	Director	April 16, 2008
<u>James S. Manuso</u>	Director	
<u>/s/ David B. McWilliams*</u> David B. McWilliams	Director	April 16, 2008
<u>/s/ Simyon Palmin*</u> Simyon Palmin	Director	April 16, 2008
<u>/s/ Howard M. Schneider*</u> Howard M. Schneider	Director	April 16, 2008

* Harry S. Palmin, as attorney-in-fact.

EXHIBIT INDEX

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2.2	Agreement and plan of merger between Common Horizons and Novelos Therapeutics, Inc. dated June 7, 2005		10-QSB	August 15, 2005	2.2
3.1	Amended and Restated Certificate of Incorporation filed as Exhibit A to the Certificate of Merger merging Nove Acquisition, Inc. with and into Novelos Therapeutics, Inc. dated May 26, 2005		10-QSB	August 10, 2007	3.1
3.2	Certificate of Merger merging Common Horizons, Inc. with and into Novelos Therapeutics, Inc. dated June 13, 2005		10-QSB	August 10, 2007	3.2
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10.3 **	Compensation for independent directors		8-K	December 22, 2006	99.1
10.4**	2000 Stock Option and Incentive Plan		SB-2	November 16, 2005	10.2

10.5 **	Form of 2004 non-plan non-qualified stock option	SB-2	November 16, 2005	10.3
10.6 **	Form of non-plan non-qualified stock option used from February to May 2005	SB-2	November 16, 2005	10.4

Exhibit No.	Description	Filed with this Form SB-2	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
10.7 **	Form of non-plan non-qualified stock option used after May 2005		SB-2	November 16, 2005	10.5
10.8	Form of common stock purchase warrant issued in March 2005		SB-2	November 16, 2005	10.6
10.9	Form of securities purchase agreement dated May 2005		8-K	June 2, 2005	99.1
10.10	Form of subscription agreement dated September 30, 2005		8-K	October 3, 2005	99.1
10.11	Form of Class A common stock purchase warrant dated September 30, 2005		8-K	October 3, 2005	99.3
10.12	Form of share escrow agreement		8-K	November 3, 2005	10.3
10.13	Consideration and new technology agreement dated April 1, 2005 with ZAO BAM		10-QSB	August 15, 2005	10.2
10.14	Letter agreement dated March 31, 2005 with The Oxford Group, Ltd.		10-QSB	August 15, 2005	10.3
10.15	Form of securities purchase agreement dated March 2, 2006		8-K	March 3, 2006	99.2
10.16	Form of common stock purchase warrant dated March 2006		8-K	March 3, 2006	99.3
10.17	Placement Agent Agreement with Oppenheimer & Co. Inc. dated December 19, 2005		8-K	March 3, 2006	99.4
10.18**	2006 Stock Incentive Plan		10-QSB	November 6, 2006	10.1
10.19	Form of Incentive Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.1
10.20	Form of Non-Statutory Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.2
10.21	Form of Non-Statutory Director Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.3
10.22	Securities Purchase Agreement dated April 12, 2007		10-QSB	May 8, 2007	10.1
10.23	Letter Amendment dated May 2, 2007 to the Securities Purchase Agreement		10-QSB	May 8, 2007	10.2
10.24	Registration Rights Agreement dated		10-QSB	May 8, 2007	10.3

	May 2, 2007			
10.25	Placement Agent Agreement with Rodman & Renshaw, LLC dated February 12, 2007	10-QSB	May 8, 2007	10.4

Exhibit No.	Description	Filed with this Form SB-2	Incorporated by Reference		Exhibit No.
			Form	Filing Date	
10.26	Agreement to Exchange and Consent dated May 1, 2007		10-QSB	May 8, 2007	10.5
10.27	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Securities Purchase Agreement dated April 12, 2007		10-QSB	May 8, 2007	4.1
10.28	Form of Common Stock Purchase Warrant dated May 2, 2007 issued pursuant to the Agreement to Exchange and Consent dated May 2, 2007		10-QSB	May 8, 2007	4.2
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10.30	Amendment to Securities Purchase Agreement dated April 9, 2008		8-K	April 14, 2008	10.2
10.31	Registration Rights Agreement dated April 11, 2008		8-K	April 14, 2008	10.3
10.32	Form of Common Stock Purchase Warrant dated April 11, 2008 issued pursuant to the Securities Purchase Agreement dated March 26, 2008		8-K	April 14, 2008	4.3
10.33	Warrant Amendment Agreement dated April 11, 2008		8-K	April 14, 2008	10.5
10.34	Amendment to Registration Rights Agreement dated April 11, 2008		8-K	April 14, 2008	10.4
23.1	Consent of Foley Hoag		SB-2	May 25, 2007	5.1
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23.3	Power of Attorney (included on signature page)		SB-2	May 25, 2007	

** Management contract or compensatory plan.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors
Novelos Therapeutics, Inc.

We consent to the use of our report dated March 17, 2008 relating to the financial statements of Novelos Therapeutics, Inc. as of December 31, 2007 and 2006 and for each of the two years then ended, in this Post-Effective Amendment on Form S-1 to the Registration Statement on Form SB-2 (No. 333-143263) of Novelos Therapeutics, Inc., relating to the registration of 12,000,000 shares of common stock.

We also consent to the use of our name and the reference to us in the “Experts” section of this registration statement.

/s/ Stowe & Degon

Worcester, MA
April 15, 2008
