MANHATTAN PHARMACEUTICALS INC

FORM 10-K
(Annual Report)

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

FORM 10-K

☒ Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2007

☐ Transition Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from ___to___
Commission File Number 1-32639

MANHATTAN PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	36-3898269
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
810 Seventh Avenue, 4th Floor, New York, New York	10019
(Address of Principal Executive Offices)	(Zip Code)

(212) 582-3950
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, $0.001 par value	OTC Bulletin Board

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☒

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

The aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates of the registrant on March 17, 2008 based on the closing price of the common stock as reported on the American Stock Exchange on such date was $7,206,064.

As of March17, 2008 there were 70,624,232 outstanding shares of common stock, par value $.001 per share.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for its Annual Meeting of Stockholders to be held on June 25, 2008 (the "2008 Proxy Statement") are incorporated by reference into Part III of this Form 10-K, to the extent described in Part III. The 2008 Proxy Statement will be filed within 120 days after the fiscal year ended December 31, 2007.

MANHATTAN PHARMACEUTICALS, INC. and SUBSIDIARIES
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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References to the “Company,” the “Registrant,” “we,” “us,” or “our” or in this Annual Report on Form 10-K refer to Manhattan Pharmaceuticals, Inc., a Delaware corporation, and our consolidated subsidiaries, together taken as a whole, unless the context indicates otherwise.

Forward-Looking Statements

This annual report on Form 10-K contains forward-looking statements within the meaning of Section27A of the Securities Act of 1933, as amended, or the Securities Act, and Section21E of the Exchange Act. Any statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and may be forward-looking. These statements are often, but not always, made through the use of words or phrases such as “anticipate,” “estimate,” “plan,” “project,” “expect,” “may,” “intend” and similar words or phrases. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. These statements are therefore subject to risks and uncertainties, known and unknown, which could cause actual results and developments to differ materially from those expressed or implied in such statements. Such risks and uncertainties relate to, among other factors:

- the development of our drug candidates;
- the regulatory approval of our drug candidates;
- our use of clinical research centers and other contractors;
- our ability to find collaborative partners for research, development and commercialization of potential products;
- acceptance of our products by doctors, patients or payers;
- our ability to market any of our products;
- our history of operating losses;
- our ability to compete against other companies and research institutions;
- our ability to secure adequate protection for our intellectual property;
- our ability to attract and retain key personnel;
- availability of reimbursement for our product candidates;
- the effect of potential strategic transactions on our business;
- our ability to obtain adequate financing; and
- the volatility of our stock price.

Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

PART I

ITEM 1. DESCRIPTION OF BUSINESS

Overview

We are a clinical stage specialty pharmaceutical company focused on developing and commercializing innovative pharmaceutical therapies for underserved patient populations. We aim to acquire rights to these technologies by licensing or otherwise acquiring an ownership interest, funding their research and development and eventually either bringing the technologies to market or out-licensing. We currently have four product candidates in development: Hedrin™, a novel, non-insecticide treatment for pediculosis (head lice); Topical PTH (1-34) for the treatment of psoriasis; Altoderm™ (topical cromolyn sodium) for the treatment of pruritus associated with dermatologic conditions including atopic dermatitis; and Altolyn™ (oral tablet cromolyn sodium) for the treatment of mastocytosis. We have not received regulatory approval for, or generated commercial revenues from marketing or selling any drugs.

Our executive offices are located at 810 Seventh Avenue, 4 th floor, New York, NY 10019 USA. Our telephone number is (212) 582-3950 and our internet website address is www.manhattanpharma.com .

Corporate History – Merger Transaction(s)

We were incorporated in Delaware in 1993 under the name "Atlantic Pharmaceuticals, Inc." and, in March 2000, we changed our name to "Atlantic Technology Ventures, Inc." In 2003, we completed a "reverse acquisition" of privately held "Manhattan Research Development, Inc." In connection with this transaction, we also changed our name to "Manhattan Pharmaceuticals, Inc." From an accounting perspective, the accounting acquirer is considered to be Manhattan Research Development, Inc. and accordingly, the historical financial statements are those of Manhattan Research Development, Inc.

During 2005 we merged with Tarpan Therapeutics, Inc. ("Tarpan"). Tarpan was a privately held New York based biopharmaceutical company developing dermatological therapeutics. Through the merger, we acquired Tarpan's primary product candidate, Topical PTH (1-34) for the treatment of psoriasis. In consideration for their shares of Tarpan's capital stock, the stockholders of Tarpan received an aggregate of approximately 10,731,000 shares of our common stock, representing approximately 20% of our then outstanding common shares. This transaction was accounted for as a purchase of Tarpan by the Company.

Our Research and Development Programs

Hedrin ™

In June 2007, Manhattan Pharmaceuticals entered into an exclusive license agreement with Thornton & Ross Ltd. ("T&R") and Kerris, S.A. ("Kerris") for a product candidate called Hedrin (the "Hedrin License Agreement"). We acquired an exclusive North American license to certain patent rights and other intellectual property relating to Hedrin, a non-insecticide product candidate for the treatment of head lice. In addition, and at the same time, we also entered into a Supply Agreement with T&R pursuant to which T&R will be the Company's exclusive supplier of Hedrin product (the "Hedrin Supply Agreement").

In February 2008, Manhattan Pharmaceuticals announced that it had entered into a joint venture agreement with Nordic Biotech Advisors ApS ("Nordic") to develop and commercialize Hedrin. A 50/50 joint venture entity was formed that now owns, will develop and will secure a commercialization partner for the Hedrin product in North America (the "Hedrin JV"). Manhattan Pharmaceuticals will manage the day-to-day operations of the Hedrin JV. The joint venture entity has been independently funded and will be responsible for all costs associated with the Hedrin project, including any necessary United States ("U.S.") clinical trials, patent costs, and future milestones owed to the original licensor, T&R.

Pediculosis (Head lice)

Head lice (*Pediculus humanus capitis*) are small parasitic insects that live mainly on the human scalp and neck hair. Head lice are not known to transmit disease, but they are highly contagious and are acquired by direct head-to-head contact with an infested person's hair, and may also be transferred with shared combs, hats, and other hair accessories. They can also live on bedding or upholstered furniture for a brief period. Head lice are seen across the socioeconomic spectrum and are unrelated to personal cleanliness or hygiene. Children are more frequently infested than are adults, and Caucasians more frequently than other ethnic groups. Lice are most commonly found on the scalp, behind the ears, and near the neckline at the back of the neck. Common symptoms include a tickling feeling of something moving in the hair, itching, irritability caused by poor sleep, and sores on the head caused by scratching. According to our internal analysis, a majority of the currently available prescription and over-the-counter ("OTC") head lice treatments are chemical insecticides.

Mechanism of Action

Hedrin is a novel, non-insecticide combination of silicones (dimethicone and cyclomethicone) that acts as a pediculicidal (lice killing) agent by disrupting the insect's mechanism for managing fluid and breathing. In contrast with most currently available lice treatments, Hedrin contains no chemical insecticides. Because Hedrin kills lice by preventing the louse from excreting waste fluid and by asphyxiation (smothering), rather than by acting on the central nervous system, the insects have not build up resistance to the treatment. Recent studies have indicated that resistance to chemical insecticides may be increasing and therefore contributing to insecticide treatment failure. Manhattan Pharmaceuticals believes there is significant market potential for convenient, non-insecticide treatment alternatives. Both silicones in this proprietary formulation of Hedrin are used extensively in cosmetics and toiletries.

Clinical Development

To date, Hedrin has been clinically studied in 326 subjects and is currently marketed as a medical device in Western Europe and as a pharmaceutical in the United Kingdom ("U.K.").

In a randomized, controlled, equivalence, clinical study (conducted in Europe), Hedrin was administered to 253 adult and child subjects with head lice infestation. The study results, published in the British Medical Journal in June 2005, demonstrated Hedrin's equivalence when compared to the insecticide treatment, phenothrin, the most widely used pediculicide in the U.K. In addition, according to the same study, the Hedrin treated subjects experienced significantly less irritation (2%) than those treated with phenothrin (9%).

An additional clinical study published in the November 2007 issue of PLoS One, an international, peer-reviewed journal published by the Public Library of Science (PLoS), demonstrated Hedrin's superior efficacy compared to a U.K. formulation of malathion, a widely used insecticide treatment in both Europe and North America. In this randomized, controlled, assessor blinded, parallel group clinical trial, 73 adult and child subjects with head lice infestations were treated with Hedrin or malathion liquid. Using intent-to-treat analysis, Hedrin achieved a statistically significant cure rate of 70% compared to 33% with malathion liquid. Using the per-protocol analysis Hedrin achieved a highly statistically significant cure rate of 77% compared to 35% with malathion. In Europe, it has been widely documented that head lice has become resistant to malathion, and we believe this resistance may have influenced the study results. To date, there have been no reports of malathion resistance in the U.S. Additionally, Hedrin treated subjects experienced no irritant reactions, and Hedrin showed clinical equivalence to malathion in its ability to inhibit egg hatching. Overall, investigators and study subjects rated Hedrin as less odorous, easier to apply, and easier to wash out, and 97% of Hedrin treated subjects stated they were significantly more inclined to use the product again versus 31% of those using malathion.

In the U.S., Manhattan Pharmaceuticals, through the Hedrin JV, is pursuing the development of Hedrin as a medical device and has submitted an initial regulatory package to the U.S. Food and Drug Administration ("FDA") Center for Devices and Radiological Health. The Company expects to be required to complete at least one clinical trial with this product candidate.

Market and Competition

In Europe, Hedrin has been launched in 21 countries and has achieved annual sales through its licensees of approximately $45 million at in-market public prices, and is the market leader in the U.K. with $11 million in sales (23% market share) and France with a 21% market share. These figures do not include sales in Germany, Spain and Greece where Hedrin was launched in mid-late 2007.

According to the American Academy of Pediatrics an estimated 6-12 million Americans are infested with head lice each year, with pre-school and elementary children and their families affected most often. The total U.S. head lice market is estimated to be over $200 million with prescription and over-the-counter (OTC) therapies comprising approximately 50% of that market. The remaining 50% of the market is comprised of alternative therapies such as tea tree oils, mineral oils, and "nit picking", or physical combing to remove lice. We believe there is significant market potential for a convenient, non-insecticide treatment for head lice.

The prescription and OTC segment of the market is dominated by 4-5 name brand products and numerous, low cost generics and store brand equivalents. The active ingredients in these pharmacological therapies are chemical insecticides. The most frequently prescribed insecticide treatments are Kwell (lindane) and Ovide (malathion), and the most frequently purchased OTC brands are Rid (pyrethrin), Nix (permethrin), and Pronto (pyrethrin). Lindane has been banned in 52 countries worldwide and has now been banned in the state of California due to its toxicity. European formulations of Malathion have experienced widespread resistance. Resistance to U.S. formulations of malathion have not been widely reported, but experts believe it may eventually develop with continued use. Head lice resistance to pyrethrin and permethrin has been reported in the U.S. and treatment failures are common.

See also "Management's Discussion and Analysis of Financial Condition and Results of Operations- Liquidity and Capital Resources- Research and Development Projects- Hedrin."

Topical PTH (1-34)

As a result of our merger with Tarpan Therapeutics in 2005, we hold an exclusive, worldwide license to develop and commercialize Topical PTH (1-34) for the treatment of psoriasis. Tarpan acquired the exclusive, worldwide rights pursuant to a 2004 license agreement with IGI, Inc ("IGI"). Topical PTH (1-34) has been tested in a Phase 1/2 clinical study conducted under a physician investigational new drug application ("P-IND").

Psoriasis

Psoriasis is a common, chronic, immune-mediated disease that results in the over-production of skin cells. In healthy skin, immature skin cells migrate from the lowest layer of the epidermis to the skin's surface over a period of 28-30 days. In psoriasis, these cells reproduce at an extremely accelerated rate and advance to the surface in only 7 days. This results in a build up of excess, poorly differentiated skin cells that accumulate in dry, thick patches known as plaques. These plaques can appear anywhere on the body resulting in skin irritation and disability.

Mechanism of Action

It is believed that Topical PTH (1-34) is an agonist that mimics a natural protein responsible for regulating the growth of skin cells. The presence of this natural protein, PTHrp, is significantly reduced in the skin of psoriasis patients leading to skin cell hyperproliferation, poor differentiation of skin cells, and ultimately, the accumulation of dry thick patches of skin (plaques). Acting in place of the absent PTHrp, it is also believed that Topical PTH (1-34) is able to help restore skin cells' normal rate of development, migration and turnover, reducing cell accumulation and the formation of plaques.

Clinical Development

In 2003, researchers, led by Michael Holick, MD, PhD, Professor of Medicine, Physiology, and Biophysics at Boston University Medical Center, reported positive results from a US Phase 1 and 2 clinical trial conducted under a P-IND evaluating the safety and efficacy of Topical PTH (1-34) as a topical treatment for psoriasis. This double-blind, placebo controlled trial in 15 patients compared Topical PTH (1-34) formulated in the Novasome® Technology versus the Novasome® vehicle alone. Following 8 weeks of treatment, the topical application of Topical PTH (1-34) resulted in complete clearing of the treated lesion in 60% of patients and partial clearing in 85% of patients. Additionally, there was a statistically significant improvement in the global severity score. Ten patients continued receiving Topical PTH (1-34) in an open label extension study in which the Psoriasis Area and Severity Index (PASI) was measured; PASI improvement across all 10 patients achieved statistically significant improvement compared to baseline. This study showed Topical PTH (1-34) to be well tolerated and efficacious for the treatment of plaque psoriasis with no patients experiencing any clinically significant adverse events.

Due to the high response rate seen in patients in the initial trial with Topical PTH (1-34), we believe that it may have an important clinical advantage over current topical psoriasis treatments. A Phase 2a clinical study testing Topical PTH (1-34) under a P-IND was initiated in December 2005 under the auspices of Boston University. In April 2006, and prior to dosing subjects, we reported a delay in our Phase 2a clinical study of Topical PTH (1-34) due to a formulation issue. We believe we have resolved this issue through a new gel formulation of Topical PTH (1-34) and have filed new patent applications in the U.S. for this new proprietary formulation.

In September 2007, the U.S. FDA accepted our corporate Investigational New Drug ("IND") application for this new gel formulation of Topical PTH (1-34), and in October 2007, we initiated and began dosing subjects in a Phase 2a clinical study of Topical PTH (1-34) for the treatment of psoriasis. This U.S., multi-center, randomized, double-blind, vehicle-controlled, parallel group study is designed to evaluate safety and preliminary efficacy of Topical PTH (1-34) for the treatment of psoriasis. Approximately 54 subjects will be enrolled and randomized to receive one of two dose levels of Topical PTH (1-34), or vehicle, for an 8 week treatment period. In this study the vehicle is the topical formulation without the active ingredient, PTH (1-34). We expect to announce the results of this study in Summer 2008.

Market and Competition

According to the National Psoriasis Foundation nearly 2% of the worldwide population, including approximately 4.5 million Americans, suffers from psoriasis. In the U.S. psoriasis patients are responsible for nearly 2.4 million visits to dermatologists each year at an annual cost of nearly $3 billion. Manhattan Pharmaceuticals estimates the U.S. topical psoriasis therapeutics market to be approximately $400-500 million, with the market throughout the rest of the world in the same range.

The efficacy and safety profile of Topical PTH (1-34) potentially make it an attractive alternative to existing topical treatments, photo therapies and systemic treatments such as methotrexate and biologics for the treatment of psoriasis. We are developing Topical PTH (1-34) as a monotherapy and for use in combination with currently available therapies. Some of Topical PTH (1-34)'s competitors would include, but are not limited to over-the-counter, or "OTC," prescription topical treatments, and laser treatment. Treatments such as phototherapy, methotrexate, cyclosporine, Remicade ® (Johnson & Johnson), Enbrel ® (Amgen), Amiveve ® (Astellas), and Raptiva ® (Genentech) are generally used for more severe patients due to their harsh side effect profiles.

There are a number of treatments available today for psoriasis, including topicals and steroids. Topical treatments include numerous OTC ointments that help to reduce inflammation, soothe skin and enhance the efficacy of other therapies. Steroids are also prescribed as an adjunct therapy for pain and anti-inflammation. One of the most frequently prescribed topical treatments is Dovonex ® (calcipotriene), which is an active vitamin D3 analogue. Approximately 60% of patients show some response to Dovonex ® in the first few months of treatment, however, 60% of these patients become resistant to treatment in 6-12 months. Dovonex ® sales in the US in 2006 were $147 million

See also "Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources - Research and Development Projects – Topical PTH (1-34)."

Altoderm ™

In April 2007 we entered into a license agreement with T&R, pursuant to which we acquired exclusive rights to develop and commercialize Altoderm in North America. Altoderm is a novel, proprietary formulation of topical cromolyn sodium and is designed to enhance the absorption of cromolyn sodium into the skin in order to treat pruritus (itch) associated with dermatologic conditions including atopic dermatitis (eczema).

Atopic Dermatitis (Eczema)

Atopic dermatitis, also know as eczema, is a chronic disease of the skin that is believed to be caused by a combination of hereditary and environmental factors. The main symptoms of atopic dermatitis include dry, itchy skin leading to rashes on the face, hands, feet, along with inside the elbows and behind the knees. Scratching results in redness, swelling, cracking, "weeping" clear fluid, and crusting or scaling.

Mechanism of Action

Altoderm is a topical formulation of cromolyn sodium, a non-steroidal, anti-inflammatory agent that is categorized as a mast cell stabilizer. Cromolyn sodium has been shown to block allergic reactions by inhibiting the release of inflammatory mediators, including histamine and leukotrienes. Elevated levels of these agents result in local and systemic inflammation that, in turn, leads to conditions such as atopic dermatitis. By reducing the release of inflammatory agents by mast cells, Manhattan Pharmaceuticals believes that Altoderm may effectively treat patients suffering from pruritus associated with atopic dermatitis, and possibly other dermatologic conditions. Cromolyn sodium has been used worldwide for over 35 years to treat a number of allergic conditions includin asthma, allergic rhinitis (nasal allergies), allergic conjunctivitis (eye allergies), and internal allergic conditions such as mastocytosis.

Clinical Development

In a Phase 3, randomized, double-blind, placebo-controlled, parallel-group, clinical study (conducted in Europe by T&R.) the compound was administered for 12 weeks to 114 subjects with moderately severe atopic dermatitis. The placebo (vehicle) used in this study was the Altoderm product without the active ingredient. In the study results, published in the British Journal of Dermatology in February 2005, Altoderm demonstrated a statistically significant reduction (36%) in atopic dermatitis symptoms. During the study, subjects were permitted to continue with their existing treatment, in most cases this consisted of emollients and topical steroids. A positive secondary outcome of the study was a 35% reduction in the use of topical steroids for the Altoderm treated subjects. Further analysis of the clinical data, performed by Manhattan Pharmaceuticals, showed that Altoderm treated subjects also experienced a 57% reduction in pruritus.

Altoderm is currently being tested in a second, ongoing Phase 3, randomized, double-blind, vehicle-controlled clinical study (also conducted in Europe by T&R). Analysis of the preliminary data from the initial 12 week, blinded portion of this clinical trial has been completed. The vehicle used in this study was the Altoderm product without the active ingredient, cromolyn sodium. The preliminary data indicate Altoderm was safe and well tolerated, and showed a trend toward improvement in pruritus, but the efficacy results were inconclusive. Altoderm treated subjects and vehicle only treated subjects experienced a similar improvement (each greater than 30%), and therefore, the study did not achieve statistical significance. The Company believes these outcomes were due to suboptimal study design where subjects were unrestricted in their use of concomitant therapies such as topical steroids and immunomodulators. In this study subjects treated with vehicle alone in the blinded portion of the study were switched to Altoderm for the open label portion of the study. Analysis of the preliminary open label data beginning at week 13 of the study, show vehicle treated subjects demonstrating further improvement when switched to Altoderm. Given the promising clinical data obtained from the first European Phase 3 study, and the symptom improvements reported in the ongoing European Phase 3 study, both Manhattan Pharmaceuticals and T&R believe there is significant potential for Altoderm and will continue development of this product candidate.

On March 6, 2008, Manhattan Pharmaceuticals announced it had successfully completed a pre-IND meeting with the FDA. Based on a review of the submitted package for Altoderm, including data from the two previously reported Phase 3 clinical studies, the FDA determined that following completion of certain nonclinical studies, and the acceptance of an IND, Phase 2 clinical studies may be initiated in the U.S. The FDA also concurred that the proposed indication of pruritus associated with dermatologic conditions including atopic dermatitis can be pursued.

Market and Competition

According to the National Institutes of Health, an estimated 10-20% of all infants and young children and 1-3% of adults have atopic dermatitis (eczema). This translates to approximately 15 million Americans suffering from the disease. Insurance companies spend more than $1 billion annually on the condition.

Topical steroids, topical immunomodulators, systemic antihistamines, and moisturizing agents are currently the primary pharmaceutical treatments for atopic dermatitis. However, these products are not meeting the needs of patients due to unwanted side effects including skin thinning, acne, hypopigmentation, and secondary infection, among others, and limited evidence to support their long term safety. Based on these limitations of current atopic dermatitis treatments, there is a significant market opportunity for new, effective therapies.

See also "Management's Discussion and Analysis of Financial Condition and Results of Operations- Liquidity and Capital Resources- Research and Development Projects- Altoderm."

Altolyn ™

In April 2007 we entered into a license agreement with T&R, pursuant to which we acquired exclusive rights to develop and commercialize Altolyn in North America. Altolyn is a novel, proprietary oral tablet formulation of cromolyn sodium designed to treat mastocytosis and possibly other gastrointestinal disorders such as food allergy and symptoms of irritable bowel syndrome.

Mastocytosis

Mastocytosis is a rare disorder that occurs in both children and adults. It is caused by the presence of too many mast cells in the body. Mast cells are found in skin, linings of the stomach and intestine, and connective tissue (such as cartilage and tendons). Mast cells play an important role in helping the immune systems defend these tissues from disease. They release chemical "alarms" such as histamine and cytokines to attract other key players of the immune defense system to sites in the body where they might be needed. People with mastocytosis experience abdominal discomfort, nausea and vomiting, ulcers, diarrhea, and skin lesions.

Mechanism of Action

Altolyn is a novel oral tablet formulation of cromolyn sodium that has been formulated using site specific drug delivery technology. This unique formulation targets release of the drug in the upper region of the small intestine. Cromolyn sodium, which has been used for more than 35 years to treat a variety of allergic conditions, is a mast cell stabilizer that reduces mast cell activation and decreases the release of inflammatory mediators.

Nonclinical Development

On March 6, 2008, Manhattan Pharmaceuticals announced it had successfully completed a pre-IND meeting with the FDA. Based on a review of the submitted package for Altolyn, the FDA concurred that the proposed indication of mastocytosis can be pursued and that the 505 (b)(2) NDA would be an acceptable approach provided a clinical bridge is established between Altolyn and Gastrocrom®, the oral liquid formulation of cromolyn sodium currently approved in the U.S. to treat mastocytosis. Section 505(b)(2) of the Food, Drug and Cosmetic Act allows the FDA to approve a follow-on drug on the basis of data in the scientific literature or data used by FDA in the approval of other drugs.The FDA also affirmed that a single, Phase 3 study demonstrating the efficacy of Altolyn over placebo, may be sufficient to support a product approval in the U.S. In addition, the FDA also concurs that no additional nonclinical studies will be required to support an IND application. The Company is working with T&R and the current U.K. manufacturer of Altolyn to develop a Good Manufacturing Process ("cGMP") compliant manufacturing process.

Early clinical experience with Altolyn in the U.K. suggests promising activity in patients with various allergic disorders, including food allergy and inflammatory bowel conditions. The Company may pursue these as additional indications.

See also "Management's Discussion and Analysis of Financial Condition and Results of Operations- Liquidity and Capital Resources- Research and Development Projects- Altolyn."

Oleoyl-estrone

On July 9, 2007 the Company announced the results of its two Phase 2a clinical trials of oral Oleoyl-estrone ("OE"). The results of both randomized, double-blind, placebo controlled studies, one in common obesity and the other in morbid obesity, demonstrated no statistically or clinically meaningful placebo adjusted weight loss for any of the treatment arms evaluated. Based on these results, the Company discontinued its OE programs in both common obesity and morbid obesity.

Propofol Lingual Spray

On July 9, 2007 the Company announced that it discontinued development of Propofol Lingual Spray for pre-procedural sedation.

Intellectual Property and License Agreements

Our goal is to obtain, maintain and enforce patent protection for our products, formulations, processes, methods and other proprietary technologies, preserve our trade secrets, and operate without infringing on the proprietary rights of other parties, both in the United States and in other countries. Our policy is to actively seek to obtain, where appropriate, the broadest intellectual property protection possible for our product candidates, proprietary information and proprietary technology through a combination of contractual arrangements and patents, both in the U.S. and elsewhere in the world.

We also depend upon the skills, knowledge and experience of our scientific and technical personnel, as well as that of our advisors, consultants and other contractors. none This knowledge and experience we call "know-how". To help protect our proprietary know-how which is not patentable, and for inventions for which patents may be difficult to enforce, we rely on trade secret protection and confidentiality agreements to protect our interests. To this end, we require all employees, consultants, advisors and other contractors to enter into confidentiality agreements which prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business.

Hedrin

On June 26, 2007, the Company entered into an exclusive license the Hedrin agreement with T&R and Kerris. Pursuant to the Hedrin License Agreement, the Company has acquired an exclusive North American license to certain patent rights and other intellectual property relating to Hedrin ^{TM} , a non-insecticide product candidate for the treatment of pediculosis ("head lice"):

1. U.S. Patent Application No. 2007/0142330, entitled, "Method and composition for the control of arthropods." Jayne Ansell, Inventor. Application filed February 12, 2007. This application is a divisional of U.S. application Ser. No. 10/097,615, filed Mar. 15, 2002, which is a continuation of International Application No. PCT/GB00/03540, which designated the United States and was filed on Sep. 14, 2000. This application has not yet issued as a patent. Any patent that issues will expire on September14, 2020.

This patent application has numerous, detailed and specific claims related to the use of Hedrin (novel formulation of silicon derivatives) in controlling and repelling arthropods such as insects and arachnids, and in particular control and eradication of head lice and their ova.

In addition, on June 26, 2007, the Company entered into the Hedrin Supply Agreement with T&R pursuant to which T&R will be the Company's exclusive supplier of the Hedrin product.

In consideration for the license, the Company issued to T&R and Kerris (jointly, the "Licensor") a combined total of 150,000 shares of its common stock valued at $120,000. In addition, the Company also made a cash payment of $600,000 to the Licensor. Further, the Company agreed to make future milestone payments to the Licensor comprised of various combinations of cash and common stock in respective aggregate amounts of $2,500,000 upon the achievement of various clinical and regulatory milestones as follows: $250,000 upon acceptance by the FDA of an IND; $1,000,000 upon the achievement of a successful outcome of a Phase 3 clinical trial; $700,000 upon the final approval of a New Drug Application ("NDA"), or its equivalent, by the FDA; $300,000 upon the issuance of a U.S. patent on Hedrin: and $250,000 upon receipt of marketing authorization in Canada.

Through December 31, 2007, none of the milestones have been reached and sales have not commenced, therefore, we have not paid any such milestones or royalties.

The Company also agreed to pay royalties to the Licensor of 8% (or, under certain circumstances, 4%) on net sales of licensed products. The Company's exclusivity under the Hedrin Agreement is subject to an annual minimum royalty payment of $1,000,000 (or, under certain circumstances, $500,000) in each of the third through seventh years following the first commercial sale of Hedrin. The Company may sublicense its rights under the Hedrin Agreement with the consent of Licensor and the proceeds resulting from such sublicenses will be shared with the Licensor.

Pursuant to the Hedrin Supply Agreement, the Company has agreed that it and its sublicensees will purchase their respective requirements of the Hedrin product from T&R at agreed upon prices. Under certain circumstances where T&R is unable to supply Hedrin products in accordance with the terms and conditions of the Supply Agreement, the Company may obtain product from an alternative supplier subject to certain conditions. The term of the Supply Agreement ends upon termination of the Hedrin Agreement.

On February 25, 2008 the Company assigned and transferred its rights in Hedrin to the Hedrin JV . The Hedrin JV is now responsible for all of the Company's obligations under the Hedrin License Agreement and the Hedrin Supply Agreement.

Topical PTH (1-34) License Agreement .

In connection with our April 2005 acquisition of Tarpan Therapeutics, Inc., we acquired Tarpan's rights under an April 2004 Sublicense Agreement with IGI, Inc. (the "IGI Agreement"). Pursuant to this agreement we now have worldwide, exclusive license rights to the U.S. and foreign patents and patent applications for all topical uses of Topical PTH(1-34) for the treatment of hyperproliferative skin disorders including psoriasis:

1. U.S. Patent No. 5,527,772, entitled "Regulation of cell proliferation and differentiation using peptides." M.F. Holick, Inventor. Application filed July, 28, 1994. Patent issued June 18, 1996. This patent expires June 18, 2013.

2. U.S. Patent No. 5,840,690, entitled “Regulation of cell proliferation and differentation using peptides.” M.F. Holick, Inventor. Application filed June 6, 1995. Patent issued November 24, 1998. This patent expires June 18, 2013.

3. U.S. Provisional application No. US60/940,509, entitled “Topical Compositions comprising a macromolecule and methods of using same.” Application was filed on May 29, 2007.

These patents have numerous, detailed and specific claims relating to the topical use of Topical PTH (1-34)

The IGI sublicense agreement requires us to make certain milestone payments as follows: $300,000 payable upon the commencement of a Phase 2 clinical trial; $500,000 upon the commencement of a Phase 3 clinical trial; $1,500,000 upon the acceptance of an Investigational New Drug Application (“NDA”) by the FDA; $2,400,000 upon the approval of an NDA by the FDA; $500,000 upon the commencement of a Phase 3 clinical trial for an indication other than psoriasis; $1,500,000 upon the acceptance of and NDA application for an indication other than psoriasis by the FDA; and $2,400,000 upon the approval of an NDA for an indication other than psoriasis by the FDA.

During 2007 we achieved the milestone of the commencement of a Phase 2 clinical trial. As a result $300,000 became payable to IGI. This $300,000 is included in research and development expense for the year ended December 31, 2007. Payment was made to IGI in February 2008. At December 31, 2008 this $300,000 liability is reflected in accounts payable.

In addition, we are obligated to pay IGI, Inc. an annual royalty of 6% on annual net sales up to $200,000,000. In any calendar year in which net sales exceed $200,000,000, we are obligated to pay IGI, Inc. an annual royalty of 9% annual net sales. Through December 31, 2007 sales have not commenced, therefore we have not paid any such royalties.

IGI, Inc. may terminate the agreement (i) upon 60 days’ notice if we fail to make any required milestone or royalty payments, or (ii) if we become bankrupt or if a petition in bankruptcy is filed, or if we are placed in the hands of a receiver or trustee for the benefit of creditors. IGI, Inc. may terminate the agreement upon 60 days’ written notice and an opportunity to cure in the event we commit a material breach or default. We may terminate the agreement in whole or as to any portion of the PTH patent rights upon 90 days’ notice to IGI, Inc.

Altoderm

On April 3, 2007, the Company entered into a license agreement for Altoderm (the “Altoderm Agreement”) with T&R. Pursuant to the Altoderm Agreement, the Company acquired an exclusive North American license to certain patent rights and other intellectual property relating to Altoderm, a topical skin lotion product candidate with the active ingredient cromolyn sodium (also known as sodium cromoglicate) for the treatment of pruritis (itch) associated with dermatologic conditions including atopic dermatitis:

1. U.S. Patent No. 7,109,246, entitled “Pharmaceutical compositions comprising an amphoteric surfactant an alkoxylated cetyl alcohol and a polar drug.” Brian Hawtin, Inventor. Application filed May 20, 1999. Patent issued September 19, 2006. This patent expires on May 20, 2019.

2. U.S. Application Publication No. 2007/0036860, entitled “Treatment of allergic conditions.” Alexander James Wigmore, Inventor. Any patent that issues will expire on November 9, 2019. This patent covers both Altoderm and Altolyn.

These patents have numerous, detailed and specific claims related to the use of Altoderm (composition of topically administered cromolyn sodium) for treating atopic dermatitis (eczema).

In accordance with the terms of the Altoderm Agreement, the Company issued 125,000 shares of its common stock, valued at $112,500, and made a cash payment of $475,000 to T&R upon the execution of the agreement. Further, the Company agreed to make future milestone payments to T&R comprised of various combinations of cash and common stock in respective aggregate amounts of $5,675,000 and 875,000 shares of our common stock upon the achievement of various clinical and regulatory milestones. as follows: $450,000 upon acceptance by FDA of an IND; 125,000 shares of our common stock upon the first dosing of a patient in the first Phase 2 clinical trial; 250,000 shares of our common stock and $625,000 upon the first dosing of a patient in the first Phase 3 clinical trial; $1,000,000 upon the achievement of a successful outcome of a Phase 3 clinical trial; $1,100,000 upon the acceptance for filing of a NDA application by the FDA; 500,000 shares of our common stock and $2,000,000 upon the final approval of an NDA by the FDA; and $500,000 upon receipt of marketing authorization in Canada.

In addition, we are obligated to pay T&R an annual royalty of 10% on annual net sales of up to $100,000,000; 15% of the amount of annual net sales in excess of $100,000,000 and 20% of annual net sales in excess of $200,000,000. There is a minimum royalty of $1,000,000 per year. There is a one-time success fee of $10,000,000 upon the achievement of cumulative net sales of $100,000,000. Through December 31, 2007, none of the milestones have been reached and sales have not commenced, therefore, we have not paid any such milestones or royalties.

Altolyn

On April 3, 2007, the Company and T&R also entered into a license agreement for Altolyn (the “Altolyn Agreement”). Pursuant to the Altolyn Agreement, the Company acquired an exclusive North American license to certain patent rights and other intellectual property relating to Altolyn, an oral tablet formulation product candidate using sodium cromolyn for the treatment of mastocytosis, food allergies, and inflammatory bowel disorder.

1. U.S. Patent No. 7,258,872, entitled “Chromone enteric release formulation.” Alexander James Wigmore, Inventor. Application filed November 9, 1999, claiming the benefit of a GB application filed November 11, 1998. Patent issued August 21, 2007. The expected date of expiration, which was November 9, 2019, has been extended by 793 days (expiration date Jan 10, 2022).

2. U.S. Application Publication No. 2007/0036860, entitled “Treatment of allergic conditions.” Alexander James Wigmore, Inventor. Application filed October 13, 2006, claiming the benefit of a prior U.S. application, which claimed the benefit of a PCT application filed November 9, 1999. This application has not yet issued as a patent. Any patent that issues is expected to expire on November 9, 2019. This patent covers both Altoderm and Altolyn.

These patents have numerous, detailed and specific claims related to Altolyn (as an oral tablet drug delivery composition), and the pending application discloses and may be used to claim the use of Altolyn (composition of orally administered sodium cromolyn) for the treatment of allergic conditions, specifically food allergies.

In accordance with the terms of the Altolyn Agreement, the Company made a cash payment of $475,000 to T&R upon the execution of the agreement. Further, the Company agreed to make future milestone payments to T&R comprised of various combinations of cash and common stock in respective aggregate amounts of $5,675,000 upon the achievement of various clinical and regulatory milestones. as follows: $450,000 upon acceptance filing by the FDA of an IND; $625,000 upon the first dosing of a patient in the first Phase 3 clinical trial; $1,000,000 upon the achievement of a successful outcome of a Phase 3 clinical trial; $1,100,000 upon the acceptance for filing of a NDA application by the FDA; $2,000,000 upon the final approval of an NDA by the FDA; and $500,000 upon receipt of marketing authorization in Canada.

In addition, we are obligated to pay T&R an annual royalty of 10% on annual net sales of up to $100,000,000; 15% of the amount of annual net sales in excess of $100,000,000 and 20% of annual net sales in excess of $200,000,000. There is a minimum royalty of $1,000,000 per year. There is a one-time success fee of $10,000,000 upon the achievement of cumulative net sales of $100,000,000. Through December 31, 2007, none of the milestones have been reached and sales have not commenced, therefore, we have not paid any such milestones or royalties.

Oleoyl-estrone

On July 9, 2007 the Company announced the results of its two Phase 2a clinical trials of oral OE. The results of both randomized, double-blind, placebo controlled studies, one in common obesity and the other in morbid obesity, demonstrated no statistically or clinically meaningful placebo adjusted weight loss for any of the treatment arms evaluated. Based on these results, the Company discontinued its OE programs in both common obesity and morbid obesity.

Propofol Lingual Spray

On July 9, 2007 the Company announced that it discontinued development of Propofol Lingual Spray for pre-procedural sedation.

Manufacturing

We do not have any manufacturing capabilities. We are in contact with several contract cGMP manufacturers for the supply of Topical PTH(1-34), Hedrin, Altoderm and Altolyn that will be necessary to conduct human clinical trials.

Government Regulation

The research, development, testing, manufacture, labeling, promotion, advertising, distribution, and marketing, among other things, of our products are extensively regulated by governmental authorities in the United States and other countries. In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or the FDCA, and its implementing regulations. Failure to comply with the applicable U.S. requirements may subject us to administrative or judicial sanctions, such as FDA refusal to approve pending NDAs, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, and/or criminal prosecution.

Drug Approval Process. None of our drugs may be marketed in the U.S. until the drug has received FDA approval. The steps required before a drug may be marketed in the U.S. include:

- nonclinical laboratory tests, animal studies, and formulation studies,

- submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials may begin,
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug for each indication,
- submission to the FDA of an NDA,
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with current good manufacturing practices, or cGMPs, and
- FDA review and approval of the NDA.

Nonclinical tests include laboratory evaluation of product chemistry, toxicity, and formulation, as well as animal studies. The conduct of the nonclinical tests and formulation of the compounds for testing must comply with federal regulations and requirements. The results of the nonclinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND, which must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about issues such as the conduct of the trials as outlined in the IND. In such a case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. We cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin.

Clinical trials involve the administration of the investigational drug to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing the objectives of the study, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap. The study protocol and informed consent information for study subjects in clinical trials must also be approved by an Institutional Review Board for each institution where the trials will be conducted. Study subjects must sign an informed consent form before participating in a clinical trial. Phase 1 usually involves the initial introduction of the investigational drug into people to evaluate its short-term safety, dosage tolerance, metabolism, pharmacokinetics and pharmacologic actions, and, if possible, to gain an early indication of its effectiveness. Phase 2 usually involves trials in a limited patient population to (i) evaluate dosage tolerance and appropriate dosage; (ii) identify possible adverse effects and safety risks; and (iii) preliminarily evaluate the efficacy of the drug for specific indications. Phase 3 trials usually further evaluate clinical efficacy and test further for safety by using the drug in its final form in an expanded patient population. There can be no assurance that Phase 1, Phase 2, or Phase 3 testing will be completed successfully within any specified period of time, if at all. Furthermore, we or the FDA may suspend clinical trials at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

The FDCA permits FDA and the IND sponsor to agree in writing on the design and size of clinical studies intended to form the primary basis of an effectiveness claim in an NDA application. This process is known as Special Protocol Assessment, or SPA. These agreements may not be changed after the clinical studies begin, except in limited circumstances.

Assuming successful completion of the required clinical testing, the results of the nonclinical and clinical studies, together with other detailed information, including information on the manufacture and composition of the drug, are submitted to the FDA in the form of a NDA requesting approval to market the product for one or more indications. The testing and approval process requires substantial time, effort, and financial resources. The agencies review the application and may deem it to be inadequate to support the registration and we cannot be sure that any approval will be granted on a timely basis, if at all. The FDA may also refer the application to the appropriate advisory committee, typically a panel of clinicians, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendations of the advisory committee.

The FDA has various programs, including fast track, priority review, and accelerated approval, that are intended to expedite or simplify the process for reviewing drugs, and/or provide for approval on the basis surrogate endpoints. Generally, drugs that may be eligible for one or more of these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that provide meaningful benefit over existing treatments. We cannot be sure that any of our drugs will qualify for any of these programs, or that, if a drug does qualify, that the review time will be reduced.

Section 505(b)(2) of the FDCA allows the FDA to approve a follow-on drug on the basis of data in the scientific literature or data used by FDA in the approval of other drugs. This procedure potentially makes it easier for generic drug manufacturers to obtain rapid approval of new forms of drugs based on proprietary data of the original drug manufacturer. We intend to rely on Section 505(b)(2) to obtain approval for Altolyn.

Before approving an NDA, the FDA usually will inspect the facility or the facilities at which the drug is manufactured, and will not approve the product unless cGMP compliance is satisfactory. If the FDA evaluates the NDA and the manufacturing facilities as acceptable, the FDA may issue an approval letter, or in some cases, an approvable letter followed by an approval letter. Both letters usually contain a number of conditions that must be met in order to secure final approval of the NDA. When and if those conditions have been met to the FDA's satisfaction, the FDA will issue an approval letter. The approval letter authorizes commercial marketing of the drug for specific indications. As a condition of NDA approval, the FDA may require post marketing testing and surveillance to monitor the drug's safety or efficacy, or impose other conditions.

After approval, certain changes to the approved product, such as adding new indications, making certain manufacturing changes, or making certain additional labeling claims, are subject to further FDA review and approval. Before we can market our product candidates for additional indications, we must obtain additional approvals from FDA. Obtaining approval for a new indication generally requires that additional clinical studies be conducted. We cannot be sure that any additional approval for new indications for any product candidate will be approved on a timely basis, or at all.

Post-Approval Requirements . Often times, even after a drug has been approved by the FDA for sale, the FDA may require that certain post-approval requirements be satisfied, including the conduct of additional clinical studies. If such post-approval conditions are not satisfied, the FDA may withdraw its approval of the drug. In addition, holders of an approved NDA are required to: (i) report certain adverse reactions to the FDA, (ii) comply with certain requirements concerning advertising and promotional labeling for their products, and (iii) continue to have quality control and manufacturing procedures conform to cGMP after approval. The FDA periodically inspects the sponsor's records related to safety reporting and/or manufacturing facilities; this latter effort includes assessment of compliance with cGMP. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. We intend to use third party manufacturers to produce our products in clinical and commercial quantities, and future FDA inspections may identify compliance issues at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct. In addition, discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved NDA, including withdrawal of the product from the market.

Orphan Drug. The FDA may grant orphan drug designation to drugs intended to treat a "rare disease or condition," which generally is a disease or condition that affects fewer than 200,000 individuals in the United States. Orphan drug designation must be requested before submitting an NDA. If the FDA grants orphan drug designation, which it may not, the identity of the therapeutic agent and its potential orphan use are publicly disclosed by the FDA. Orphan drug designation does not convey an advantage in, or shorten the duration of, the review and approval process. If a product that has an orphan drug designation subsequently receives the first FDA approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, meaning that the FDA may not approve any other applications to market the same drug for the same indication, except in certain very limited circumstances, for a period of seven years. Orphan drug designation does not prevent competitors from developing or marketing different drugs for that indication.

Non-United States Regulation . Before our products can be marketed outside of the United States, they are subject to regulatory approval similar to that required in the United States, although the requirements governing the conduct of clinical trials, including additional clinical trials that may be required, product licensing, pricing and reimbursement vary widely from country to country. No action can be taken to market any product in a country until an appropriate application has been approved by the regulatory authorities in that country. The current approval process varies from country to country, and the time spent in gaining approval varies from that required for FDA approval. In certain countries, the sales price of a product must also be approved. The pricing review period often begins after market approval is granted. Even if a product is approved by a regulatory authority, satisfactory prices may not be approved for such product.

In Europe, marketing authorizations may be submitted at a centralized, a decentralized or national level. The centralized procedure is mandatory for the approval of biotechnology products and provides for the grant of a single marketing authorization that is valid in all European Union ("EU") members states. As of January 1995, a mutual recognition procedure is available at the request of the applicant for all medicinal products that are not subject to the centralized procedure. There can be no assurance that the chosen regulatory strategy will secure regulatory approvals on a timely basis or at all.

Employees

We currently have 1 part time and 6 full time employees, including 1 person devoted to research and development and 6 persons in business development, administration and finance, including our senior management. None of our employees is covered by a collective bargaining unit. We believe our relations with our employees is satisfactory.

Risk Factors

An investment in our securities is speculative in nature, involves a high degree of risk, and should not be made by an investor who cannot bear the economic risk of its investment for an indefinite period of time and who cannot afford the loss of its entire investment. You should carefully consider the following risk factors and the other information contained elsewhere in this Annual Report before making an investment in our securities.

Risks Related to Our Business

We currently have no product revenues and will need to raise additional funds in the future. If we are unable to obtain the funds necessary to continue our operations, we will be required to delay, scale back or eliminate one or more of our drug development programs.

We have generated no product revenues to date and will not until, and if, we receive approval from the FDA and other regulatory authorities for our product candidates. We have already spent substantial funds developing our potential products and business, however, and we expect to continue to have negative cash flow from our operations for at least the next several years. As of December 31, 2007, we had $649,686 of cash and cash equivalents. We received additional funding of approximately $2 million net from a joint venture agreement in February 2008. We will still have to raise substantial additional funds to complete the development of our drug candidates and to bring them to market. Beyond the capital requirements mentioned above, our future capital requirements will depend on numerous factors, including:

- the results of any clinical trials;
- the scope and results of our research and development programs;
- the time required to obtain regulatory approvals;
- our ability to establish and maintain marketing alliances and collaborative agreements; and
- the cost of our internal marketing activities.

Additional financing may not be available on acceptable terms, if at all. If adequate funds are not available, we will be required to delay, scale back or eliminate one or more of our drug development programs or obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain of our technologies or products that we would not otherwise relinquish.

We are not currently profitable and may never become profitable.

We have a history of losses and expect to incur substantial losses and negative operating cash flow for the foreseeable future, and we may never achieve or maintain profitability. We have incurred losses in every period since our inception on August 6, 2001. For the year ended December 31, 2007 and for the period from August 6, 2001 (inception) through December 31, 2007, we incurred net losses applicable to common shares of $12,032,252, and $54,999,070 respectively. Even if we succeed in developing and commercializing one or more of our product candidates, we expect to incur substantial losses for the foreseeable future and may never become profitable. We also expect to continue to incur significant operating and capital expenditures and anticipate that our expenses will increase substantially in the foreseeable future as we:

- continue to undertake nonclinical development and clinical trials for our product candidates;
- seek regulatory approvals for our product candidates;
- implement additional internal systems and infrastructure;
- lease additional or alternative office facilities; and
- hire additional personnel.

We also expect to experience negative cash flow for the foreseeable future as we fund our operating losses and capital expenditures. As a result, we will need to generate significant revenues in order to achieve and maintain profitability. We may not be able to generate these revenues or achieve profitability in the future. Our failure to achieve or maintain profitability could negatively impact the value of our common stock.

We have a limited operating history upon which to base an investment decision.

We are a development-stage company and have not yet demonstrated any ability to perform the functions necessary for the successful commercialization of any product candidates. The successful commercialization of our product candidates will require us to perform a variety of functions, including:

- continuing to undertake nonclinical development and clinical trials;
- participating in regulatory approval processes;
- formulating and manufacturing products; and
- conducting sales and marketing activities.

Since inception as Manhattan Research Development, Inc., our operations have been limited to organizing and staffing, and acquiring, developing and securing our proprietary technology and undertaking nonclinical and clinical trials of principal product candidates. These operations provide a limited basis for you to assess our ability to commercialize our product candidates and the advisability of investing in our securities.

We may not obtain the necessary U.S. or worldwide regulatory approvals to commercialize our product candidates.

We will need FDA approval to commercialize our product candidates in the U.S. and approvals from the FDA equivalent regulatory authorities in foreign jurisdictions to commercialize our product candidates in those jurisdictions. In order to obtain FDA approval of any of our product candidates, we must first submit to the FDA an IND, which will set forth our plans for clinical testing of our product candidates. In September 2007, the FDA accepted our IND for Topical PTH(1-34). Our remaining three products, Hedrin, Altoderm, and Altolyn, are currently considered pre-clinical. We are unable to estimate the size and timing of the clinical and non clinical trials required to bring our four product candidates to market and, accordingly, cannot estimate the time when development of these product candidates will be completed.

When the clinical testing for our product candidates is complete, we will submit to the FDA a NDA demonstrating that the product candidate is safe for humans and effective for its intended use. This demonstration requires significant research and animal tests, which are referred to as nonclinical studies, as well as human tests, which are referred to as clinical trials. Satisfaction of the FDA's regulatory requirements typically takes many years, depends upon the type, complexity and novelty of the product candidate and requires substantial resources for research, development and testing. We cannot predict whether our research and clinical approaches will result in drugs that the FDA considers safe for humans and effective for indicated uses. The FDA has substantial discretion in the drug approval process and may require us to conduct additional nonclinical and clinical testing or to perform post-marketing studies. The approval process may also be delayed by changes in government regulation, future legislation or administrative action or changes in FDA policy that occur prior to or during our regulatory review. Delays in obtaining regulatory approvals may:

- delay commercialization of, and our ability to derive product revenues from, our product candidates;
- impose costly procedures on us; and
- diminish any competitive advantages that we may otherwise enjoy.

Even if we comply with all FDA requests, the FDA may ultimately reject one or more of our NDAs. We cannot be sure that we will ever obtain regulatory clearance for any of our product candidates. Failure to obtain FDA approval of any of our product candidates will severely undermine our business by reducing our number of salable products and, therefore, corresponding product revenues.

In foreign jurisdictions, we must receive approval from the appropriate regulatory authorities before we can commercialize our drugs. Foreign regulatory approval processes generally include all of the risks associated with the FDA approval procedures described above. We have not yet made any determination as to which foreign jurisdictions we may seek approval and have not undertaken any steps to obtain approvals in any foreign jurisdiction.

Clinical trials are very expensive, time consuming and difficult to design and implement.

Human clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The clinical trial process is also time consuming. We estimate that clinical trials of our product candidates will take at least several years to complete. Furthermore, failure can occur at any stage of the trials, and we could encounter problems that cause us to abandon or repeat clinical trials. The commencement and completion of clinical trials may be delayed by several factors, including:

- unforeseen safety issues;
- determination of dosing issues;
- lack of effectiveness during clinical trials;
- slower than expected rates of patient recruitment;
- inability to monitor patients adequately during or after treatment; and
- inability or unwillingness of medical investigators to follow our clinical protocols.

In addition, we or the FDA may suspend our clinical trials at any time if it appears that we are exposing participants to unacceptable health risks or if the FDA finds deficiencies in our IND submissions or the conduct of these trials.

The results of our clinical trials may not support our product candidate claims.

Even if our clinical trials are completed as planned, we cannot be certain that their results will support our product candidate claims. Success in nonclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the results of later clinical trials will replicate the results of prior clinical trials and nonclinical testing. The clinical trial process may fail to demonstrate that our product candidates are safe for humans or effective for indicated uses. This failure would cause us to abandon a product candidate and may delay development of other product candidates. Any delay in, or termination of, our clinical trials will delay the filing of our NDAs with the FDA and, ultimately, our ability to commercialize our product candidates and generate product revenues. In addition, we anticipate that our clinical trials will involve only a small patient population. Accordingly, the results of such trials may not be indicative of future results over a larger patient population.

Physicians and patients may not accept and use our drugs.

Even if the FDA approves our product candidates, physicians and patients may not accept and use them. Acceptance and use of our product will depend upon a number of factors including:

- perceptions by members of the health care community, including physicians, about the safety and effectiveness of our drugs;
- cost-effectiveness of our product relative to competing products;
- availability of reimbursement for our products from government or other healthcare payers; and
- effectiveness of marketing and distribution efforts by us and our licensees and distributors, if any.

Because we expect sales of our current product candidates, if approved, to generate substantially all of our product revenues for the foreseeable future, the failure of any of these drugs to find market acceptance would harm our business and could require us to seek additional financing.

Our drug-development program depends upon third-party researchers who are outside our control.

We currently are collaborating with several third-party researchers, for the development of our product candidates. Accordingly, the successful development of our product candidates will depend on the performance of these third parties. These collaborators will not be our employees, however, and we cannot control the amount or timing of resources that they will devote to our programs. Our collaborators may not assign as great a priority to our programs or pursue them as diligently as we would if we were undertaking such programs ourselves. If outside collaborators fail to devote sufficient time and resources to our drug-development programs, or if their performance is substandard, the approval of our FDA applications, if any, and our introduction of new drugs, if any, will be delayed. These collaborators may also have relationships with other commercial entities, some of whom may compete with us. If our collaborators assist our competitors at our expense, our competitive position would be harmed.

We rely exclusively on third parties to formulate and manufacture our product candidates.

We have no experience in drug formulation or manufacturing and do not intend to establish our own manufacturing facilities. We lack the resources and expertise to formulate or manufacture our own product candidates. We intend to contract with one or more manufacturers to manufacture, supply, store and distribute drug supplies for our clinical trials. If any of our product candidates receive FDA approval, we will rely on one or more third-party contractors to manufacture our drugs. Our anticipated future reliance on a limited number of third-party manufacturers, exposes us to the following risks:

- We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited and the FDA must approve any replacement contractor. This approval would require new testing and compliance inspections. In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, production of our products after receipt of FDA approval, if any.

- Our third-party manufacturers might be unable to formulate and manufacture our drugs in the volume and of the quality required to meet our clinical needs and commercial needs, if any.

- Our future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store and distribute our products.

- Drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the Drug Enforcement Agency, and corresponding state agencies to ensure strict compliance with good manufacturing practice and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers' compliance with these regulations and standards.

- If any third-party manufacturer makes improvements in the manufacturing process for our products, we may not own, or may have to share, the intellectual property rights to the innovation.

We have no experience selling, marketing or distributing products and no internal capability to do so.

We currently have no sales, marketing or distribution capabilities. We do not anticipate having the resources in the foreseeable future to allocate to the sales and marketing of our proposed products. Our future success depends, in part, on our ability to enter into and maintain such collaborative relationships, the collaborator's strategic interest in the products under development and such collaborator's ability to successfully market and sell any such products. We intend to pursue collaborative arrangements regarding the sales and marketing of our products, however, there can be no assurance that we will be able to establish or maintain such collaborative arrangements, or if able to do so, that they will have effective sales forces. To the extent that we decide not to, or are unable to, enter into collaborative arrangements with respect to the sales and marketing of our proposed products, significant capital expenditures, management resources and time will be required to establish and develop an in-house marketing and sales force with technical expertise. There can also be no assurance that we will be able to establish or maintain relationships with third party collaborators or develop in-house sales and distribution capabilities. To the extent that we depend on third parties for marketing and distribution, any revenues we receive will depend upon the efforts of such third parties, and there can be no assurance that such efforts will be successful. In addition, there can also be no assurance that we will be able to market and sell our product in the United States or overseas.

If we cannot compete successfully for market share against other drug companies, we may not achieve sufficient product revenues and our business will suffer.

The market for our product candidates is characterized by intense competition and rapid technological advances. If our product candidates receive FDA approval, they will compete with a number of existing and future drugs and therapies developed, manufactured and marketed by others. Existing or future competing products may provide greater therapeutic convenience or clinical or other benefits for a specific indication than our products, or may offer comparable performance at a lower cost. If our products fail to capture and maintain market share, we may not achieve sufficient product revenues and our business will suffer.

We will compete against fully integrated pharmaceutical companies and smaller companies that are collaborating with larger pharmaceutical companies, academic institutions, government agencies and other public and private research organizations. Many of these competitors have product candidates that will compete with ours already approved or in development. In addition, many of these competitors, either alone or together with their collaborative partners, operate larger research and development programs and have substantially greater financial resources than we do, as well as significantly greater experience in:

- developing drugs;
- undertaking nonclinical testing and human clinical trials;
- obtaining FDA and other regulatory approvals of drugs;
- formulating and manufacturing drugs; and
- launching, marketing and selling drugs.

Developments by competitors may render our products or technologies obsolete or non-competitive.

Many of the organizations competing with us have substantially greater capital resources, larger research and development staffs and facilities, longer drug development history in obtaining regulatory approvals and greater manufacturing and marketing capabilities than we do. These organizations also compete with us to attract qualified personnel, parties for acquisitions, joint ventures or other collaborations.

If we fail to adequately protect or enforce our intellectual property rights or secure rights to patents of others, the value of our intellectual property rights would diminish.

Our success, competitive position and future revenues will depend in part on our ability and the abilities of our licensors to obtain and maintain patent protection for our products, methods, processes and other technologies, to preserve our trade secrets, to prevent third parties from infringing on our proprietary rights and to operate without infringing the proprietary rights of third parties.

We currently do not directly own the rights to any issued patents. We license the exclusive rights to a total of four issued patents relating to our current product candidates, which expire from 2013 to 2022. See “Business – Intellectual Property and License Agreements.”.

However, with regard to the patents covered by our license agreements and any future patents issued to which we will have rights, we cannot predict:

- the degree and range of protection any patents will afford us against competitors including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- if and when patents will issue;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings which may be costly whether we win or lose.

Our success also depends upon the skills, knowledge and experience of our scientific and technical personnel, our consultants and advisors as well as our licensors and contractors. To help protect our proprietary know-how and our inventions for which patents may be unobtainable or difficult to obtain, we rely on trade secret protection and confidentiality agreements. To this end, we require all of our employees, consultants, advisors and contractors to enter into agreements which prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business. These agreements may not provide adequate protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure or the lawful development by others of such information. If any of our trade secrets, know-how or other proprietary information is disclosed, the value of our trade secrets, know-how and other proprietary rights would be significantly impaired and our business and competitive position would suffer.

If we infringe the rights of third parties we could be prevented from selling products, forced to pay damages, and defend against litigation.

Our business is substantially dependent on the intellectual property on which our product candidates are based. To date, we have not received any threats or claims that we may be infringing on another’s patents or other intellectual property rights. If our products, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs and we may have to:

- obtain licenses, which may not be available on commercially reasonable terms, if at all;
- redesign our products or processes to avoid infringement;
- stop using the subject matter claimed in the patents held by others;
- pay damages; or
- defend litigation or administrative proceedings which may be costly whether we win or lose, and which could result in a substantial diversion of our valuable management resources.

Our ability to generate product revenues will be diminished if our drugs sell for inadequate prices or patients are unable to obtain adequate levels of reimbursement.

Our ability to commercialize our drugs, alone or with collaborators, will depend in part on the extent to which reimbursement will be available from:

- government and health administration authorities;
- private health maintenance organizations and health insurers; and
- other healthcare payers.

Significant uncertainty exists as to the reimbursement status of newly approved healthcare products. Healthcare payers, including Medicare, are challenging the prices charged for medical products and services. Government and other healthcare payers increasingly attempt to contain healthcare costs by limiting both coverage and the level of reimbursement for drugs. Even if our product candidates are approved by the FDA, insurance coverage may not be available, and reimbursement levels may be inadequate, to cover our drugs. If government and other healthcare payers do not provide adequate coverage and reimbursement levels for any of our products, once approved, market acceptance of our products could be reduced.

We may not successfully manage our growth.

Our success will depend upon the expansion of our operations and the effective management of our growth, which will place a significant strain on our management and on our administrative, operational and financial resources. To manage this growth, we must expand our facilities, augment our operational, financial and management systems and hire and train additional qualified personnel. If we are unable to manage our growth effectively, our business may suffer.

If we are unable to hire additional qualified personnel, our ability to grow our business may be harmed.

We will need to hire additional qualified personnel with expertise in nonclinical testing, clinical research and testing, government regulation, formulation and manufacturing and sales and marketing. We compete for qualified individuals with numerous biopharmaceutical companies, universities and other research institutions. Competition for such individuals is intense, and we cannot be certain that our search for such personnel will be successful. Attracting and retaining qualified personnel will be critical to our success.

We may incur substantial liabilities and may be required to limit commercialization of our products in response to product liability lawsuits.

The testing and marketing of medical products entail an inherent risk of product liability. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our products. We currently carry clinical trial insurance in an amount up to $5,000,000, which may be inadequate to protect against potential product liability claims or may inhibit the commercialization of pharmaceutical products we develop, alone or with corporate collaborators. Although we intend to maintain clinical trial insurance during any clinical trials, this may be inadequate to protect us against any potential claims. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

We are controlled by current officers, directors and principal stockholders.

Our directors, executive officers and principal stockholders beneficially own approximately 27 percent of our outstanding voting stock and, including shares underlying outstanding options and warrants. Accordingly, these persons and their respective affiliates will have the ability to exert substantial influence over the election of our Board of Directors and the outcome of issues submitted to our stockholders.

Risks Related to Our Securities

Our stock price is, and we expect it to remain, volatile, which could limit investors' ability to sell stock at a profit.

During the last two fiscal years, our stock price has traded at a low of $0.09 in the fourth quarter of 2007 to a high of $1.64 in the first quarter of 2006. The volatile price of our stock makes it difficult for investors to predict the value of their investment, to sell shares at a profit at any given time, or to plan purchases and sales in advance. A variety of factors may affect the market price of our common stock. These include, but are not limited to:

- publicity regarding actual or potential clinical results relating to products under development by our competitors or us;
- delay or failure in initiating, completing or analyzing nonclinical or clinical trials or the unsatisfactory design or results of these trials;
- achievement or rejection of regulatory approvals by our competitors or us;
- announcements of technological innovations or new commercial products by our competitors or us;
- developments concerning proprietary rights, including patents;
- developments concerning our collaborations;
- regulatory developments in the United States and foreign countries;
- economic or other crises and other external factors;
- period-to-period fluctuations in our revenues and other results of operations;
- changes in financial estimates by securities analysts; and
- sales of our common stock.

We will not be able to control many of these factors, and we believe that period-to-period comparisons of our financial results will not necessarily be indicative of our future performance.

In addition, the stock market in general, and the market for biotechnology companies in particular, has experienced extreme price and volume fluctuations that may have been unrelated or disproportionate to the operating performance of individual companies. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance.

We have delisted from the American Stock Exchange .

As a result of our delisting , the liquidity of our common stock may be reduced, not only in terms of the number of shares that can be bought and sold at a given price, but also through delays in the timing of transactions and reduction in security analysts' and the media's coverage of us. This may result in lower prices for our common stock than might otherwise be obtained and could also result in a larger spread between the bid and asked prices for our common stock.

We have never paid dividends.

We have never paid dividends on our common stock and do not anticipate paying any dividends for the foreseeable future. You should not rely on an investment in our stock if you require dividend income. Further, you will only realize income on an investment in our stock in the event you sell or otherwise dispose of your shares at a price higher than the price you paid for your shares. Such a gain would result only from an increase in the market price of our common stock, which is uncertain and unpredictable.

ITEM 2. LEGAL PROCEEDINGS

Swiss Pharma Contract LTD ("Swiss Pharma"), a clinical site that the Company used in one of its obesity trials, gave notice to the Company that Swiss Pharma believes it is entitled to receive an additional payment of $322,776 for services in connection with that clinical trial. While the contract between the Company and Swiss Pharma provides for additional payments if certain conditions are met, Swiss Parma has not specified which conditions they believe have been achieved and the Company does not believe that Swiss Pharma is entitled to additional payments and has not accrued any of these costs as of December 31, 2007. The contract between the Company and Swiss Pharma provides for arbitration in the event of a dispute, such as this claim for an additional payment. Swiss Pharma has filed for arbitration. As the Company does not believe that Swiss Pharma is entitled to additional payments, it intends to defend its position in arbitration. The arbitration process is currently in its initial stage.

ITEM 3. DESCRIPTION OF PROPERTY

Our executive offices are located at 810 Seventh Avenue, 4th Floor, New York, New York 10019. We currently occupy this space pursuant to a written lease that expires on September 30, 2008 under which we pay rent of approximately $11,800 per month.

We believe that our existing facilities are adequate to meet our current requirements. We do not own any real property.

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

We held our Annual Meeting of Stockholders at the American Stock Exchange, 86 Trinity Place, New York, New York on May 24, 2007. The stockholders took the following actions:

(i) The stockholders elected seven directors to serve until the next Annual Meeting of Stockholders. The stockholders present in person or by proxy cast the following numbers of votes in connection with the election of directors, resulting in the election of all nominees:

Nominee	Votes For	Votes Withheld
Douglas Abel	35,536,892	65,132
Neil Herskowitz	35,376,093	225,931
Malcolm Hoenlein	35,518,495	83,529
Timothy McInerney	35,538,692	63,332
Joan Pons Gimbert	35,154,378	447,646
Richard I. Steinhart	35,529,736	72,288
Michael Weiser	34,493,245	1,108,779

(ii) The stockholders ratified the amendment to our 2003 Stock Option Plan increasing the number of shares available for issuance thereunder from 7,400,000 to 10,400,000. 34,440,971 votes were cast for the proposal; 1,107,853 votes were cast against the proposal, shares representing 53,200 votes abstained; and there were no broker non-votes.

(iii) The stockholders ratified the appointment of J.H. Cohn LLP as our independent registered public accounting firm for fiscal 2007. 35,519,099 votes were cast for the proposal; 8,205 votes were cast against the proposal, shares representing 74,720 votes abstained; and there were no broker non-votes.

PART II

ITEM 5. MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market for Common Stock

Our common stock traded on the American Stock Exchange “AMEX”under the symbol “MHA” during the years ended December 31, 2006 and 2007. The following table lists the high and low price for our common stock as quoted, in U.S. dollars, on the American Stock Exchange during each quarter within the last two fiscal years:

	Price Range			
	2007		2006	
Quarter Ended	High	Low	High	Low
March 31	$ 0.96	$ 0.70	$ 1.640	$ 1.160
June 30	1.10	0.69	1.360	0.075
September 30	0.78	0.22	0.880	0.620
December 31	0.23	0.09	0.920	0.620

On March 26, 2008 our common stock was voluntarily delisted from the AMEX and began trading on the Over the Counter Bulletin Board (“OCTBB”) under the symbol “MHAN”.

Record Holders

The number of holders of record of our common stock as of March17, 2008 was 460.

Dividends

We have not paid or declared any dividends on our common stock and we do not anticipate paying dividends on our common stock in the foreseeable future.

Stock Repurchases

We did not make any repurchases of our common stock during 2007.

Securities authorized for issuance under equity compensation plans.

See Note 6 to Consolidated Financial Statements .

ITEM 6. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Overview

We were incorporated in Delaware in 1993 under the name "Atlantic Pharmaceuticals, Inc." and, in March 2000, we changed our name to "Atlantic Technology Ventures, Inc." In 2003, we completed a "reverse acquisition" of privately held "Manhattan Research Development, Inc". In connection with this transaction, we also changed our name to "Manhattan Pharmaceuticals, Inc." From an accounting perspective, the accounting acquirer is considered to be Manhattan Research Development, Inc. and accordingly, the historical financial statements are those of Manhattan Research Development, Inc.

During 2005 we merged with Tarpan Therapeutics, Inc. ("Tarpan"). Tarpan was a privately held New York based biopharmaceutical company developing dermatological therapeutics. Through the merger, we acquired Tarpan's primary product candidate, Topical PTH (1-34) for the treatment of psoriasis. In consideration for their shares of Tarpan's capital stock, the stockholders of Tarpan received an aggregate of approximately 10,731,000 shares of our common stock, representing approximately 20% of our then outstanding common shares. This transaction was accounted for as a purchase of Tarpan by the Company.

We are a clinical-stage specialty pharmaceutical company focused on developing and commercializing innovative pharmaceutical therapies for underserved patient populations. We aim to acquire rights to these technologies by licensing or otherwise acquiring an ownership interest, funding their research and development and eventually either bringing the technologies to market or out-licensing. We currently have four product candidates in development: Hedrin, a novel, non-insecticide treatment of pediculitis (head lice); topical PTH (1-34) for the treatment of psoriasis; Altoderm for the treatment of pruritis (itch) associated with dermatologic conditions including atopin dermatitis; and Altolyn for the treatment of mastocystosis. We have not received regulatory approval for, or generated commercial revenues from marketing or selling any drugs.

You should read the following discussion of our results of operations and financial condition in conjunction with the consolidated financial statements and notes thereto appearing elsewhere in this Form 10-K. This discussion includes "forward-looking" statements that reflect our current views with respect to future events and financial performance. We use words such as we "expect," "anticipate," "believe," and "intend" and similar expressions to identify forward-looking statements. Investors should be aware that actual results may differ materially from our expressed expectations because of risks and uncertainties inherent in future events, particularly those risks identified under the heading "Risk Factors" following Item 1 in this Annual Report, and should not unduly rely on these forward looking statements. All share and per share information in this discussion has been adjusted for the 1-for-5 combination of our common stock effected on September 25, 2003.

Results Of Operations

2007 versus 2006

During each of the years ended December 31, 2007 and 2006, we had no revenues, and are considered a development stage company. We do not expect to have revenues relating to our products prior to December 31, 2008.

	Years ended December 31,			
	2007	2006	Increase (decrease)	% Increase (decrease)
Costs and expenses				
Research and development				
Share-based compensation	$ 539,000	$ 529,000	$ 10,000	1.89%
In-license, milestone and related fees	2,245,000	250,000	1,995,000	798.00%
Other research and development expenses	5,752,000	5,394,000	358,000	6.64%
Total research and development expenses	8,536,000	6,173,000	2,363,000	38.28%
General and administrative				
Share-based compensation	902,000	1,147,000	(245,000)	-21.36%
Other general and administrative expenses	2,706,000	2,680,000	26,000	0.97%
Total general and administrative expenses	3,608,000	3,827,000	(219,000)	-5.72%
Other income	112,000	305,000	(193,000)	-63.28%
Net loss	$ 12,032,000	$ 9,695,000	$ 2,337,000	24.11%

For the year ended December 31, 2007 research and development expense was $8,536,000 as compared to $6,173,000 for the year ended December 31, 2006. This increase of $2,363,000, or 38.3%, is primarily comprised of an increase in in-license, milestone and related fees of $1,995,000, an increase in other research and development expenses of $358,000 and an increase in stock based compensation of $10,000.

For the year ended December 31, 2007 general and administrative expense was $3,608,000 as compared to $3,827,000 for the year ended December 31, 2006. This decrease of $219,000, or 5.7%, is primarily comprised of a decrease in stock based compensation of $245,000 partially offset by an increase in other general and administrative expense of $26,000.

For the year ended December 31, 2007 other income was $112,000 as compared to $305,000 for the year ended December 31, 2006. This decrease of $193,000, or 63.3%, is primarily due to a decrease in interest income which resulted from lower average balances in interest bearing and short-term investment accounts.

Net loss for the year ended December 31, 2007 was $12,032,000 as compared to $9,695,000 for the year ended December 31, 2006. This increase of $2,337,000, or 24.11%, is primarily due to an increase in in-license, milestone and related fees of $1,995,000, an increase in other research and development expenses of $358,000 and a decrease of $193,000 in other income partially offset by a decrease in stock based compensation of $235,000.

Liquidity and Capital Resources

From inception to December 31, 2007, we incurred a deficit during the development stage of $54,999,000 primarily as a result of our net losses, and we expect to continue to incur additional losses through at least December 31, 2008 and for the foreseeable future. These losses have been incurred through a combination of research and development activities related to the various technologies under our control and expenses supporting those activities.

We have financed our operations since inception primarily through equity financing. During the year ended December 31, 2007, we had a net decrease in cash and cash equivalents of $2,379,000. This decrease resulted largely from net cash used in operating activities of $10,230,000 partially offset by net cash provided by financing activities of $7,859,000. Total liquid resources as of December 31, 2007 were $650,000 compared to $3,029,000.

Our current liabilities as of December 31, 2007 were $1,872,000 compared to $1,943,000 at December 31, 2006, a decrease of $71,000. As of December 31, 2007, we had working capital deficit of $1,006,000 compared to working capital of $1,350,000 at December 31, 2006.

In February 2008, we completed a joint venture transaction. We received net proceeds of approximately $2.0 million from this joint venture transaction.

Our available working capital and capital requirements will depend upon numerous factors, including progress of our research and development programs, our progress in and the cost of ongoing and planned nonclinical and clinical testing, the timing and cost of obtaining regulatory approvals, the cost of filing, prosecuting, defending, and enforcing patent claims and other intellectual property rights, in-licensing activities, competing technological and market developments, changes in our existing collaborative and licensing relationships, the resources that we devote to developing manufacturing and commercializing capabilities, the status of our competitors, our ability to establish collaborative arrangements with other organizations and our need to purchase additional capital equipment.

Our continued operations will depend on whether we are able to raise additional funds through various potential sources, such as equity and debt financing, other collaborative agreements, strategic alliances, and our ability to realize the full potential of our technology in development. Such additional funds may not become available on acceptable terms and there can be no assurance that any additional funding that we do obtain will be sufficient to meet our needs in the long term. Through December 31, 2007, a significant portion of our financing has been through private placements of common stock and warrants. Unless our operations generate significant revenues and cash flows from operating activities, we will continue to fund operations from cash on hand and through the similar sources of capital previously described. We can give no assurances that any additional capital that we are able to obtain will be sufficient to meet our needs. We believe that we will continue to incur net losses and negative cash flows from operating activities for the foreseeable future. Based on the resources available to us at December 31, 2007 and the net proceeds from the February 2008 joint venture transaction, management believes we do not have sufficient capital to fund our operations through the end of 2008. Management believes that we will need additional equity or debt financing or will need to generate revenues through licensing our products or entering into strategic alliances during 2008 to be able to sustain our operations during 2008 and we will need additional financing thereafter until we can achieve profitability, if ever.

We have reported net losses of $12,032,000 and $9,695,000 for the years ended December 31, 2007 and 2006, respectively. The net loss attributable to common shares from date of inception, including preferred stock dividends, August 6, 2001 to December 31, 2007, amounts to $54,999,000. Management believes that we will continue to incur net losses through at least December 31, 2008.

Joint Venture Agreement

In February 2008, the Company and Nordic Biotech Advisors ApS through its investment fund Nordic Biotech Venture Fund II K/S (“Nordic”) entered into a 50/50 joint venture agreement (the “Hedrin JV”) to develop and commercialize the Company's North American rights (under license) to its Hedrin product.

Pursuant to the Hedrin JV Agreement, Nordic formed a new Danish limited partnership (the "Hedrin JV") and provided it with initial funding of $2.5 million. The Company assigned and transferred its North American rights in Hedrin to the Hedrin JV in return for a $2.0 million cash payment and equity in the Hedrin JV representing 50% of the nominal equity interests in the Hedrin JV .

Should the Hedrin JV be successful in achieving a payment milestone, namely that by September 30, 2008, the FDA determines to treat Hedrin as a medical device, Nordic will purchase an additional $2.5 million of equity in the Hedrin JV, whereupon the Hedrin JV will pay the Company an additional $1.5 million in cash and issue to the Company an additional $2.5 million in equity in the Hedrin JV, thereby maintaining the Company's 50% ownership interest in the Hedrin JV.

The Hedrin JV will be responsible for the development and commercialization of Hedrin for the North American market and all associated costs including clinical trials, if required, regulatory costs, patent costs, and future milestone payments owed to T&R, the licensor of Hedrin.

The Hedrin JV will engage the Company to provide management services to the Limited Partnership in exchange for an annualized management fee, which for 2008, on an annualized basis, is $527,000.

Nordic paid to the Company a non-refundable fee of $150,000 at the closing for the right to receive a warrant covering 7.1 million shares of the Company's common stock, exercisable for $0.14 per share. The warrant is issuable 90 days from closing, provided Nordic has not exercised all or a part of its put, as described below. The per share exercise price of the warrant was based on the volume weighted average price of the Company's common stock for the period prior to the signing of the Hedrin JV Agreement.

Nordic has an option to put all or a portion of its equity interest in the Hedrin JV to the Company in exchange for the Company's common stock. The shares of the Company's common stock to be issued upon exercise of the put will be calculated by multiplying the percentage of Nordic's equity in the Hedrin JV p that Nordic decides to put to the Company multiplied by the dollar amount of Nordic's investment in Limited Partnership divided by $0.14, as adjusted from time to time. The put option is exercisable immediately and expires at the earlier of ten years or when Nordic's distributions from the Limited Hedrin JV exceed five times the amount Nordic invested in the Hedrin JV.

The Company has an option to call all or a portion of Nordic's equity interest in the Hedrin JV in exchange for the Company's common stock. The Company cannot begin to exercise its call until the price of the Company's common stock has closed at or above $1.40 per share for 30 consecutive trading days. During the first 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 25% of its call option. During the second 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 50% of its call option on a cumulative basis. During the third 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 75% of its call option on a cumulative basis. During the fourth 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 100% of its call option on a cumulative basis. The shares of the Company's common stock to be issued upon exercise of the call will be calculated by multiplying the percentage of Nordic's equity in the Limited Partnership that the Company calls, as described above, multiplied by the dollar amount of Nordic's investment in the Hedrin JV divided by $0.14. Nordic can refuse the Company's call by either paying the Company up to $1.5 million or forfeiting all or a portion of their put, calculated on a pro rata basis for the percentage of the Nordic equity interest called by the Company.

The Hedrin JV 's Board will consist of 4 members, 2 appointed by the Company and 2 appointed by Nordic. Nordic has the right to appoint one of the directors as chairman of the Board. The chairman has certain tie breaking powers. In the event that the payment milestone described above is not achieved by June 30, 2008, then the Hedrin JV 's Board will increase to 5 members, 2 appointed by the Company and 3 appointed by Nordic.

After the closing, at Nordic's request, the Company will nominate a person identified by Nordic to serve on the Company's Board of Directors.

The Company will grant Nordic registration rights for the shares to be issued upon exercise of the warrant, the put or the call. The Company is required to file an initial registration statement within 10 calendar days of filing its Form 10-K for the year ended December 31, 2007. The Company is required to file additional registration statements, if required, within 45 days of the date the Company first knows that such additional registration statement was required. The Company is required to use commercially reasonable efforts to cause the registration statement to be declared effective by the Securities and Exchange Commission ("SEC") within 105 calendar days from the filing date. If the Company fails to file a registration statement on time or if a registration statement is not declared effective by the SEC within 105 days of filing the Company will be required to pay to Nordic, or its assigns, an amount in cash, as partial liquidated damages, equal to 0.5% per month of the amount invested in the Hedrin JV by Nordic until the registration statement is declared effective by the SEC. In no event shall the aggregate amount payable by the Company exceed 9% of the amount invested in the Hedrin JV by Nordic.

The profits of the Hedrin JV will be shared by the Company and Nordic in accordance with their respective equity interests in Limited Partnership, which are currently 50% to each, except that Nordic will get a minimum guaranteed return from the Hedrin JV equal to 5% on Hedrin sales, as adjusted for any change in Nordic's equity interest in the Limited Partnership. If the Hedrin JV realizes a profit equal to or greater than a 10% royalty on Hedrin sales, then profits will be shared by the Company and Nordic in accordance with their respective equity interests in the Limited Partnership. However, in the event of a liquidation of the Limited Partnership, Nordic's distribution in liquidation will be at least equal to the amount Nordic invested in the Hedrin JV ($5 million if the payment milestone described above is met, $2.5 million if it is not met) plus 10% per year, less the cumulative distributions received by Nordic from the Hedrin JV. Further, in no event shall Nordic's distribution in liquidation be greater than assets available for distribution in liquidation.

American Stock Exchange

In September 2007, we received notice from the staff of AMEX, indicating that we were not in compliance with certain continued listing standards set forth in the American Stock Exchange Company guide. Specifically, the American Stock Exchange notice cited our failure to comply, as of June 30, 2007, with section 1003(a)(ii) of the AMEX Company Guide as we had less than $4,000,000 of stockholders' equity and had losses from continuing operations and /or net losses in three or four of our most recent fiscal years and with section 1003(a)(iii) which requires us to maintain $6,000,000 of stockholders' equity if we have experienced losses from continuing operations and /or net losses in its five most recent fiscal years.

In order to maintain our AMEX listing, we were required to submit a plan to AMEX advising the exchange of the actions we have taken, or will take, that would bring us into compliance with all the continued listing standards by April 16, 2008. We submitted such a plan in October 2007. If we are not in compliance with the continued listing standards at the end of the plan period, or if we do not make progress consistent with the plan during the period, AMEX staff may initiate delisting proceedings.

Under the terms of the Joint Venture Agreement, the number of potentially issuable shares represented by the put and call features of the Hedrin agreement, and the warrant issuable to Nordic, would exceed 19.9% of our total outstanding shares and would be issued at a price below the greater of book or market value. As a result, under AMEX regulations, we would not have been able to complete the transaction without first receiving either stockholder approval for the transaction, or a formal "financial viability" exception from AMEX's stockholder approval requirement. We estimated that obtaining stockholder approval to comply with AMEX regulations would take a minimum of 45 days to complete. We discussed the financial viability exception with AMEX for several weeks and had neither received the exception nor been denied the exception. We determined that our financial condition required us to complete the transaction immediately, and that the Company's financial viability depended on its completion of the transaction without further delay.

Accordingly, to maintain the Company's financial viability, on February 28, 2008 we announced that we had formally notified AMEX that we intend to voluntarily delist our common stock from AMEX. The delisting became effective on March 26, 2008.

Our common stock now trades on the Over the Counter Bulletin Board ("OCTBB") under the symbol "MHAN". We intend to maintain corporate governance, disclosure and reporting procedures consistent with applicable law.

Commitments

General

We often contract with third parties to facilitate, coordinate and perform agreed upon research and development of our product candidates. To ensure that research and development costs are expensed as incurred, we record monthly accruals for clinical trials and nonclinical testing costs based on the work performed under the contracts.

These contracts typically call for the payment of fees for services at the initiation of the contract and/or upon the achievement of certain milestones. This method of payment often does not match the related expense recognition resulting in either a prepayment, when the amounts paid are greater than the related research and development costs recognized, or an accrued liability, when the amounts paid are less than the related research and development costs recognized.

Expenses associated with the clinical trials in common obesity and morbid obesity, which were concluded during 2007, were recognized on this activity based basis. At December 31, 2007 we recognized accrued expenses of $74,000 related to these clinical trials. There are no remaining financial commitments for these clinical trials.

The Company is developing Topical PTH (1-34) as a topical treatment for psoriasis. Expenses associated with the manufacture of clinical and non-clinical supplies of Topical PTH (1-34) are recognized on this activity based method. At December 31, 2007 we recognized prepaid expense of $30,000 related to the manufacture of Topical PTH (1-34). The remaining financial commitment related to the manufacture of Topical PTH (1-34) is negligible.

During 2007 we entered into an agreement with Therapeutics, Inc. for the conduct of a Phase 2a clinical trial of Topical PTH (1-34). The amount of the agreement is approximately $845,000. At December 31, 2007 we recognized research and development expense of $483,000 related to the conduct of this clinical trial. At December 31, 2007 we recognized prepaid expense of $19,000 related to this clinical trial. The remaining financial commitment related to the conduct of the clinical trial is approximately $340,000. This clinical trial is expected to conclude in the second quarter of 2008.

Swiss Pharma Contract LTD ("Swiss Pharma"), a clinical site that the Company used in one of its obesity trials, gave notice to the Company that Swiss Pharma believes it is entitled to receive an additional payment of $322,776 for services in connection with that clinical trial. While the contract between the Company and Swiss Pharma provides for additional payments if certain conditions are met, Swiss Parma has not specified which conditions they believe have been achieved and the Company does not believe that Swiss Pharma is entitled to additional payments and has not accrued any of these costs as of December 31, 2007. The contract between the Company and Swiss Pharma provides for arbitration in the event of a dispute, such as this claim for an additional payment. Swiss Pharma has filed for arbitration. As the Company does not believe that Swiss Pharma is entitled to additional payments, it intends to defend its position in arbitration. The arbitration process is currently in its initial stage.

In February 2007, a former employee of the Company alleged an ownership interest in two of the Company's provisional patent applications covering our discontinued product development program for Oleoyl-estrone. Also, without articulating precise legal claims, the former employee contends that the Company wrongfully characterized the former employee's separation from employment as a resignation instead of a dismissal in an effort to harm the former employee's immigration sponsorship efforts, and, further, to wrongfully deprive the former employee of the former employee's alleged rights in two of the Company's provisional patent applications. The former employee is seeking an unspecified amount in damages. The Company refutes the former employee's contentions and intends to vigorously defend itself should the former employee file claims against the Company. There have been no further developments with respect to these contentions.

Development Commitments

Hedrin

On June 26, 2007, the Company entered into an exclusive license agreement for Hedrin (the "Hedrin Agreement") with T&R and Kerris, S.A. ("Kerris"). Pursuant to the Hedrin Agreement, the Company has acquired an exclusive North American license to certain patent rights and other intellectual property relating to Hedrin ™ a non-insecticide product candidate for the treatment of pediculosis (head lice). In addition, on June 26, 2007, the Company entered into a Supply Agreement with T&R pursuant to which T&R will be the Company's exclusive supplier of Hedrin product.

In consideration for the license, the Company issued to T&R and Kerris (jointly, the "Licensor") a combined total of 150,000 shares of its common stock valued at $120,000. In addition, the Company also made a cash payment of $600,000 to the Licensor. These amounts are included in research and development expense.

Further, the Company agreed to make future milestone payments to T&R comprised of various combinations of cash and common stock in respective aggregate amounts of $2,500,000 upon the achievement of various clinical and regulatory milestones as follows: $250,000 upon acceptance by the U. S. Food and Drug Administration ("FDA") of an Investigational New Drug application ("IND"); $1,000,000 upon the achievement of a successful outcome of a Phase 3 clinical trial; $700,000 upon the final approval of an NDA by the FDA; $300,000 upon the issuance of a U.S. patent on Hedrin: and $250,000 upon receipt of marketing authorization in Canada.

The Company also agreed to pay royalties of 8% (or, under certain circumstances, 4%) on net sales of licensed products. The Company's exclusivity under the Hedrin Agreement is subject to an annual minimum royalty payment of $1,000,000 (or, under certain circumstances, $500,000) in each of the third through seventh years following the first commercial sale of Hedrin. The Company may sublicense its rights under the Hedrin Agreement with the consent of Licensor and the proceeds resulting from such sublicenses will be shared with the Licensor.

Through December 31, 2007, none of the milestones have been reached and sales have not commenced, therefore, we have not paid any such milestones or royalties.

Pursuant to the Supply Agreement, the Company has agreed that it and its sublicensees will purchase their respective requirements of the Hedrin product from T&R at agreed upon prices. Under certain circumstances where T&R is unable to supply Hedrin product in accordance with the terms and conditions of the Supply Agreement, the Company may obtain products from an alternative supplier subject to certain conditions. The term of the Supply Agreement ends upon termination of the Hedrin Agreement.

Topical PTH (1-34)

Through our April 2005 acquisition of Tarpan Therapeutics, Inc., we acquired a Sublicense Agreement with IGI, Inc. dated April 14, 2004. Under the IGI sublicense agreement we hold the exclusive, world-wide, royalty bearing sublicense to develop and commercialize the licensed technology. Under the terms of the IGI sublicense agreement, we are responsible for the cost of the nonclinical and clinical development of the project, including research and development, manufacturing, laboratory and clinical testing and trials and marketing of licensed products.

The IGI sublicense agreement requires us to make certain milestone payments as follows: $300,000 payable upon the commencement of a Phase 2 clinical trial; $500,000 upon the commencement of a Phase 3 clinical trial; $1,500,000 upon the acceptance of an NDA application by the FDA; $2,400,000 upon the approval of an NDA by the FDA; $500,000 upon the commencement of a Phase 3 clinical trial for an indication other than psoriasis; $1,500,000 upon the acceptance of and NDA application for an indication other than psoriasis by the FDA; and $2,400,000 upon the approval of an NDA for an indication other than psoriasis by the FDA.

During 2007, we achieved the milestone of the commencement of Phase 2 clinical trial. As a result $300,000 became payable to IGI. This $300,000 is included in research and development expense for the year ended December 31, 2007. Payment was made to IGI in February 2008. At December 31, 2007 this $300,000 liability is reflected in accounts payable.

In addition, we are obligated to pay IGI, Inc. an annual royalty of 6% on annual net sales up to $200,000,000. In any calendar year in which net sales exceed $200,000,000, we are obligated to pay IGI, Inc. an annual royalty of 9% on such excess. Through December 31, 2007, sales have not commenced, therefore, we have not paid any such royalties.

IGI, Inc. may terminate the agreement (i) upon 60 days' notice if we fail to make any required milestone or royalty payments, or (ii) if we become bankrupt or if a petition in bankruptcy is filed, or if we are placed in the hands of a receiver or trustee for the benefit of creditors. IGI, Inc. may terminate the agreement upon 60 days' written notice and an opportunity to cure in the event we commit a material breach or default. Eighteen months from the date of the IGI sublicense agreement, we may terminate the agreement in whole or as to any portion of the PTH patent rights upon 90 days' notice to IGI, Inc.

Altoder m

On April 3, 2007, the Company entered into a license agreement for “Altoderm” (the “Altoderm Agreement”) with T&R. Pursuant to the Altoderm Agreement, the Company acquired an exclusive North American license to certain patent rights and other intellectual property relating to Altoderm, a topical skin lotion product candidate with the active ingredient cromolyn sodium (also known as sodium cromoglicate) for the treatment of atopic dermatitis. In accordance with the terms of the Altoderm Agreement, the Company issued 125,000 shares of its common stock, valued at $112,500, and made a cash payment of $475,000 to T&R upon the execution of the agreement. These amounts have been included in research and development expense.

Further, the Company agreed to make future milestone payments to T&R comprised of various combinations of cash and common stock in respective aggregate amounts of $5,675,000 and 875,000 shares of our common stock upon the achievement of various clinical and regulatory milestones. as follows: $450,000 upon acceptance by the U. S. Food and Drug Administration (“FDA”) of an Investigational New Drug application (“IND”); 125,000 shares of our common stock upon the first dosing of a patient in the first Phase 2 clinical trial; 250,000 shares of our common stock and $625,000 upon the first dosing of a patient in the first Phase 3 clinical trial; $1,000,000 upon the achievement of a successful outcome of a Phase 3 clinical trial; $1,100,000 upon the acceptance for filing of a New Drug Application (“NDA”) application by the FDA; 500,000 shares of our common stock and $2,000,000 upon the final approval of an NDA by the FDA; and $500,000 upon receipt of marketing authorization in Canada.

In addition, we are obligated to pay T&R an annual royalty of 10% on annual net sales of up to $100,000,000; 15% of the amount of annual net sales in excess of $100,000,000 and 20% of annual net sales in excess of $200,000,000. There is a minimum royalty of $1,000,000 per year. There is a one-time success fee of $10,000,000 upon the achievement of of cumulative net sales of $100,000,000. Through December 31, 2007, none of the milestones have been reached and sales have not commenced, therefore, we have not paid any such milestones or royalties.

Through December 31, 2007, none of the milestones have been reached and sales have not commenced, therefore, we have not paid any such milestones or royalties.

Altolyn

On April 3, 2007, the Company and T&R also entered into a license agreement for Altolyn (the “Altolyn Agreement”). Pursuant to the Altolyn Agreement, the Company acquired an exclusive North American license to certain patent rights and other intellectual property relating to Altolyn, an oral formulation product candidate using cromolyn sodium for the treatment of mastocytosis, food allergies, and inflammatory bowel disorder. In accordance with the terms of the Altolyn Agreement, the Company made a cash payment of $475,000 to T&R upon the execution of the agreement. This amount is included in research and development expense.

Further, the Company agreed to make future milestone payments to T&R comprised of various combinations of cash and common stock in respective aggregate amounts of $5,675,000 upon the achievement of various clinical and regulatory milestones. as follows: $450,000 upon acceptance for filing by the FDA of an IND; $625,000 upon the first dosing of a patient in the first Phase 3 clinical trial; $1,000,000 upon the achievement of a successful outcome of a Phase 3 clinical trial; $1,100,000 upon the acceptance for filing of a New Drug Application (“NDA”) application by the FDA; $2,000,000 upon the final approval of an NDA by the FDA; and $500,000 upon receipt of marketing authorization in Canada.

In addition, we are obligated to pay T&R an annual royalty of 10% on annual net sales of up to $100,000,000; 15% of the amount of annual net sales in excess of $100,000,000 and 20% of annual net sales in excess of $200,000,000. There is a minimum royalty of $1,000,000 per year. There is a one-time success fee of $10,000,000 upon the achievement of cumulative net sales of $100,000,000.

Through December 31, 2007, none of the milestones have been reached and sales have not commenced, therefore, we have not paid any such milestones or royalties.

Oleoyl-estrone

On July 9, 2007, the Company announced the results of its two Phase 2a clinical trials of oral OE. The results of both randomized, double-blind, placebo controlled studies, one in common obesity and the other in morbid obesity, demonstrated no statistically or clinically meaningful placebo adjusted weight loss for any of the treatment arms evaluated. Based on these results, the Company discontinued its Oleoyl-estrone programs in both common obesity and morbid obesity.

Propofol Lingual Spray

On July 9, 2007, the Company announced that it is discontinued development of Propofol Lingual Spray for pre-procedural sedation.

Research and Development Projects

Hedrin

In collaboration with Nordic and through the Hedrin JV we are developing Hedrin for the treatment of pediculosis (head lice). To date, Hedrin has been clinically studied in 326 subjects and is currently marketed as a device in Western Europe and as a pharmaceutical in the United Kingdom (U.K.).

In a randomized, controlled, equivalence clinical study conducted in Europe by T&R, Hedrin was administered to 253 adult and child subjects with head louse infestation. The study results, published in the British Medical Journal in June 2005, demonstrated Hedrin's equivalence when compared to the insecticide treatment, phenothrin, the most widely used pediculicide in the U.K. In addition, according to the same study, the Hedrin-treated subjects experienced significantly less irritation (2%) than those treated with phenothrin (9%).

An additional clinical study published in the November 2007 issue of PLoS One, an international, peer-reviewed journal published by the Public Library of Science (PLoS), demonstrated Hedrin's superior efficacy compared to a U.K. formulation of malathion, a widely used insecticide treatment in both Europe and North America. In this randomized, controlled, assessor blinded, parallel group clinical trial, 73 adult and child subjects with head lice infestations were treated with Hedrin or malathion liquid. Using intent-to-treat analysis, Hedrin achieved a statistically significant cure rate of 70% compared to 33% with malathion liquid. Using the per-protocol analysis Hedrin achieved a highly statistically significant cure rate of 77% compared to 35% with malathion. In Europe it has been widely documented that head lice had become resistant to European formulations of malathion, and we believe this resistance had influenced these study results. To date, there have been no reports of resistance to U.S. formulations of malathion. Additionally, Hedrin treated subjects experienced no irritant reactions, and Hedrin showed clinical equivalence to malathion in its ability to inhibit egg hatching. Overall, investigators and study subjects rated Hedrin as less odorous, easier to apply, and easier to wash out, and 97% of Hedrin treated subjects stated they were significantly more inclined to use the product again versus 31% of those using malathion.

In the United States, Manhattan Pharmaceuticals is pursuing the development of Hedrin as a medical device and has submitted a regulatory package to the FDA's Center for Devices and Radiological Health. The Company expects to be required to complete at least one clinical trial with this product candidate.

To date, we have incurred $1,070,000 of project costs for the development of Hedrin. All of such costs were incurred during 2007.

Topical PTH (1-34).

We are developing Topical PTH (1-34) as a topical treatment for psoriasis. In August 2003, researchers, led by Michael Holick, Ph.D., MD, Professor of Medicine, Physiology, and Biophysics at Boston University Medical Center, reported positive results from a US Phase 1/2 clinical trial evaluating the safety and efficacy of Topical PTH (1-34) as a topical treatment for psoriasis. This double-blind, placebo controlled trial in 15 patients compared Topical PTH (1-34) formulated in the Novasome® Technology versus the Novasome® vehicle alone. Following 8 weeks of treatment, the topical application of Topical PTH (1-34) resulted in complete clearing of the treated lesion in 60% of patients and partial clearing in 85% of patients. Additionally, there was a statistically significant improvement in the global severity score. Ten patients continued into an open label extension study in which the Psoriasis Area and Severity Index, or PASI, was measured; PASI improvement across all 10 patients achieved statistically significant improvement compared to baseline. This study showed Topical PTH (1-34) to be a safe and effective treatment for plaque psoriasis with no patients experiencing any clinically significant adverse events.

Due to the high response rate seen in patients in the initial trial with Topical PTH (1-34) we believe that it may have an important clinical advantage over current topical psoriasis treatments. A follow on physician IND Phase 2a trial involving Topical PTH (1-34) was initiated in December 2005 under the auspices of Boston University. In April 2006, we reported a delay in its planned Phase 2a clinical study of Topical PTH (1-34) due to a formulation issue. We believe that we have resolved this issue through a new gel formulation of Topical PTH (1-34) and have filed new patent applications in the U.S. for this new proprietary formulation.

In September 2007, the U.S. FDA accepted our corporate Investigational New Drug (IND) application for this new gel formulation of Topical PTH (1-34), and in October 2007, we initiated and began dosing subjects in a phase 2a clinical study of Topical PTH (1-34) for the treatment of psoriasis. This U.S. multi-center, randomized, double-blind, vehicle-controlled, parallel group study is desiged to evaluate safety and preliminary efficacy of Topical PTH (1-34) for the treatment of psoriasis. Approximately 54 subjects will be enrolled and randomized to receive one of two dose levels of Topical PTH (1-34), or vehicle, for an 8 week treatment period. In this study the vehicle is the topical formulation without the active ingredient, PTH (1-34).

To date, we have incurred $5,122,000 of project costs related to our development of Topical PTH (1-34). These project costs have been incurred since April 1, 2005, the date of the Tarpan Therapeutics acquisition. During 2007, $2,426,000 of these costs were incurred.

As with the development of our other product candidates, we do not currently have sufficient capital to fund our planned development activities of Topical PTH (1-34) beyond the ongoing phase 2a trial. We will, therefore, need to raise additional capital in order to complete our planned R&D activities for Topical PTH (1-34) . To the extent additional capital is not available when we need it, we may be forced to sublicense our rights to Topical PTH (1-34) or abandon our development efforts altogether, either of which would have a material adverse effect on the prospects of our business.

Since PTH (1-34) is already available in the injectable form, we should be able to utilize much of the data that is publicly available in planning our future studies. However, since PTH (1-34) will be used topically, bridging studies will need to be performed and we are not able to realistically predict the size and the design of those studies at this time.

Altoderm

We are developing Altoderm for the pruritis (itch) associated with dermatologic conditions including atopic dermatitis. In a Phase 3, randomized, double-blind, placebo-controlled, parallel-group, clinical study (conducted in Europe by T&R.) the compound was administered for 12 weeks to 114 subjects with moderately severe atopic dermatitis. The placebo (vehicle) used in this study was the Altoderm product without the active ingredient. In the study results, published in the British Journal of Dermatology in February 2005, Altoderm demonstrated a statistically significant reduction (36%) in atopic dermatitis symptoms. During the study, subjects were permitted to continue with their existing treatment, in most cases this consisted of emollients and topical steroids. A positive secondary outcome of the study was a 35% reduction in the use of topical steroids for the Altoderm treated subjects. Further analysis of the clinical data, performed by Manhattan Pharmaceuticals showed that Altoderm treated subjects also experienced a 57% reduction in pruritus.

Altoderm is currently being tested in a second, ongoing Phase 3, randomized, double-blind, vehicle-controlled clinical study (also conducted in Europe by T&R). Analysis of the preliminary data from the initial 12 week, blinded portion of this clinical trial has been completed. The vehicle used in this study was the Altoderm product without the active ingredient, cromolyn sodium. The preliminary data indicate Altoderm was safe and well tolerated, and showed a trend toward improvement in pruritus, but the efficacy results were inconclusive. Altoderm treated subjects and vehicle only treated subjects experienced a similar improvement (each greater than 30%), and therefore, the study did not achieve statistical significance. The Company believes these outcomes were due to suboptimal study design where subjects were unrestricted in their use of concomitant therapies such as topical steroids and immunomodulators. The placebo (vehicle) used in this study was the Altoderm product without the active ingredient, cromolyn sodium. Analysis of the preliminary open label data beginning at week 13 of the study, show vehicle treated subjects demonstrating further improvement when switched to Altoderm. Given the promising clinical data obtained from the first European Phase 3 study, and the symptom improvements reported in the ongoing European Phase 3 study, both Manhattan Pharmaceuticals and Thornton & Ross Limited believe there is significant potential for Altoderm and will continue development of this product candidate.

On March 6, 2008, Manhattan Pharmaceuticals announced it had successfully completed a pre-IND meeting with the FDA. Based on a review of the submitted package for Altoderm, including data from the two previously reported Phase 3 clinical studies, the FDA determined that following completion of certain nonclinical studies, and the acceptance of an IND, Phase 2 clinical studies may be initiated in the U.S. The FDA also concurred that the proposed indication of pruritus associated with dermatologic conditions including atopic dermatitis can be pursued.

To date we have incurred $1,012,000 for the development of Altoderm. All of such costs were incurred in 2007.

Altolyn

We are developing Altolyn for the treatment of mastocystosis. On March 6, 2008, Manhattan Pharmaceuticals announced it had successfully completed a pre-IND meeting with the FDA. Based on a review of the submitted package for Altolyn, the FDA concurred that the proposed indication of mastocytosis can be pursued and that the 505(b)(2) NDA would be an acceptable approach provided a clinical bridge is established between Altolyn and Gastrocrom ®, the oral liquid formulation of cromolyn sodium currently approved in the U.S. to treat mastocytosis. The FDA also affirmed that a single, Phase 3 study demonstrating the efficacy of Altolyn over placebo, may be sufficient to support a product approval in the U.S. In addition, the FDA also concurs that no additional nonclinical studies will be required to support an IND application. The Company is working with T&R and the current U.K. manufacturer of Altolyn to develop a GMP compliant manufacturing process.

Early clinical experience with Altolyn in the U.K. suggests promising activity in patients with various allergic disorders, including food allergy and inflammatory bowel conditions. The Company may pursue these as additional indications.

To date we have incurred $790,000 for the development of Altolyn. All of such costs were incurred in 2007.

Oleoyl-estrone

On July 9, 2007, the Company announced the results of its two Phase 2a clinical trials of oral OE. The results of both randomized, double-blind, placebo controlled studies, one in common obesity and the other in morbid obesity, demonstrated no statistically or clinically meaningful placebo adjusted weight loss for any of the treatment arms evaluated. Based on these results, the Company discontinued its Oleoyl-estrone programs in both common obesity and morbid obesity.

To date, we have incurred $15,510,000 for the development of OE, $3,209,000 of which was incurred during 2007.

Propofol Lingual Spray

On July 9, 2007, the Company announced that it discontinued development of Propofol Lingual Spray for pre-procedural sedation.

To date, we have incurred $2,984,000 for the development of Propofol Lingual Spray, $27,000 of which was incurred during 2007.

Summary of Contractual Commitments

Employment Agreements

We have employment agreements with two employees for the payment of aggregate annual base salaries of $530,000 as well as performance based bonuses. All of these agreements have terms of three years and have a remaining obligation of $394,000 as of December 31, 2007.

Leases

Rent expense for the years ended December 31, 2007 and 2006 was $141,012 and $141,012, respectively. Future minimum rental payments subsequent to December 31, 2007 under an operating lease for the Company's office facility are as follows:

Years Ending December 31,	Commitment
2008	$100,000
2009 and subsequent	$0

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements.

Critical Accounting Policies

In December 2001, the SEC requested that all registrants discuss their most "critical accounting policies" in management's discussion and analysis of financial condition and results of operations. The SEC indicated that a "critical accounting policy" is one which is both important to the portrayal of the company's financial condition and results and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain.

Use of Estimates

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

Research and development expenses

All research and development costs are expensed as incurred and include costs of consultants who conduct research and development on behalf of the Company and its subsidiaries. Costs related to the acquisition of technology rights and patents for which development work is still in process are expensed as incurred and considered a component of research and development costs.

The Company often contracts with third parties to facilitate, coordinate and perform agreed upon research and development of a new drug. To ensure that research and development costs are expensed as incurred, the Company records monthly accruals for clinical trials and preclinical testing costs based on the work performed under the contracts.

These contracts typically call for the payment of fees for services at the initiation of the contract and/or upon the achievement of certain milestones. This method of payment often does not match the related expense recognition resulting in either a prepayment, when the amounts paid are greater than the related research and development costs expensed, or an accrued liability, when the amounts paid are less than the related research and development costs expensed.

Share-Based Compensation

We have stockholder-approved stock incentive plans for employees, directors, officers and consultants. Prior to January 1, 2006, we accounted for the employee, director and officer plans using the intrinsic value method under the recognition and measurement provisions of Accounting Principles Board ("APB") Opinion No.25, "Accounting for Stock Issued to Employees" and related interpretations, as permitted by Statement of Financial Accounting Standards ("SFAS" or "Statement") No. 123, "Accounting for Stock-Based Compensation."

Effective January 1, 2006, we adopted SFAS No. 123(R), "Share-Based Payment," ("Statement 123(R)") for employee options using the modified prospective transition method. Statement 123(R) revised Statement 123 to eliminate the option to use the intrinsic value method and required us to expense the fair value of all employee options over the vesting period. Under the modified prospective transition method, we recognized compensation cost for the years ended December 31,2007 and 2006 which includes a) period compensation cost related to share-based payments granted prior to, but not yet vested, as of January 1, 2006, based on the grant date fair value estimated in accordance with the original provisions of Statement 123; and b) period compensation cost related to share-based payments granted on or after January 1, 2006, based on the grant date fair value estimated in accordance with Statement 123(R). In accordance with the modified prospective method, we have not restated prior period results.

New Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements" ("SFAS 157"), which defines fair value, establishes a framework for measuring fair value in accordance with generally accepted accounting principles ("GAAP") in the United States of America, and expands disclosures about fair value measurements. SFAS 157 does not require any new fair value measurements under GAAP and is effective for fiscal years beginning after November 15, 2007. The Company will adopt SFAS 157 as of January 1, 2008. The effects of adoption will be determined by the types of instruments carried at fair value in our financial statements at the time of adoption, as well as the method utilized to determine their fair values prior to adoption. Based on the Company's current use of fair value measurements, SFAS 157 is not expected to have a material effect on its results of operations or financial position.

In February 2007, the FASB issued SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities," ("SFAS 159"), which provides companies with an option to report selected financial assets and liabilities at fair value. SFAS 159 establishes presentation and disclosure requirements designed to facilitate comparisons between companies that choose different measurement attributes for similar types of assets and liabilities and highlights the effect of a company's choice to use fair value on its earnings. It also requires a company to display the fair value of those assets and liabilities for which it has chosen to use fair value on the face of the balance sheet. SFAS 159 will be effective beginning January 1, 2008 and is not expected to have a material impact on the Company's consolidated financial statements.

In June 2007, the FASB issued EITF No. 07-3, "Accounting for Nonrefundable Advance Payments for Goods or Services Received for use in Future Research and Development Activities" ("EITF No. 07-3"). EITF No. 07-3 states that nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities should be deferred and capitalized. Such amounts should be recognized as an expense as the related goods are delivered or the related services are performed. Entities should continue to evaluate whether they expect the goods to be delivered or services to be rendered. If an entity does not expect the goods to be delivered or services to be rendered, the capitalized advance payment should be charged to expense. The provisions of EITF No. 07-3 will be effective for the Company on a prospective basis beginning January 1, 2008, evaluated on a contract by contract basis and is not expected to have a material impact on the Company's consolidated financial statements.

In December 2007, the FASB issued SFAS No. 141(R), a revised version of SFAS No. 141, "Business Combinations." The revision is intended to simplify existing guidance and converge rulemaking under U.S. generally accepted accounting principles with international accounting standards. This statement applies prospectively to business combinations where the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. An entity may not apply it before that date. The Company is currently evaluating the impact of the provisions of the revision on its consolidated results of operations and financial condition.

In December 2007, the FASB issued SFAS No. 160, " Noncontrolling Interests in Consolidated Financial Statements" (SFAS 160), which will require noncontrolling interests (previously referred to as minority interests) to be treated as a separate component of equity, not as a liability or other item outside of permanent equity. This statement applies to the accounting for noncontrolling interests and transactions with noncontrolling interest holders in consolidated financial statements. SFAS 160 will be applied prospectively to all noncontrolling interests, including any that arose before the effective date except that comparative period information must be recast to classify noncontrolling interests in equity, attribute net income and other comprehensive income to noncontrolling interests, and provide other disclosures required by Statement 160. SFAS 160 is effective for periods beginning on or after December 15, 2008. We are currently evaluating the impact that SFAS 160 will have on our consolidated financial statements.

The FASB and the Securities and Exchange Commission had issued certain other accounting pronouncements as of December 31, 2007 that will become effective in subsequent periods; however, the Company does not believe that any of those pronouncements would have significantly affected its financial accounting measures or disclosures had they been in effect during the years ended December 31, 2007 and 2006 and for the period from August 6, 2001 (inception) to December 31, 2007 or that will have a significant effect at the time they become effective.

ITEM 7. CONSOLIDATED FINANCIAL STATEMENTS

For a list of the consolidated financial statements filed as part of this report, see the Index to Consolidated Financial Statements beginning at Page F-1 of this Annual Report.

ITEM 8. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 8A(T). CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of December 31, 2007, we carried out an evaluation, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended). Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of that date in alerting them on a timely basis to material information required to be disclosed our reports to the Securities and Exchange Commission. There were no changes in our internal controls over financial reporting during the quarter ended December 31, 2007 that have materially affected, or are likely to materially affect, our internal controls over financial reporting.

Our management, including our Chief Executive Officer and its Chief Financial Officer, does not expect that disclosure controls or internal controls over financial reporting will prevent all errors or all instances of fraud, even as the same are improved to address any deficiencies. The design of any system of controls is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected.

Because of the inherent limitation of a cost-effective control system, misstatements due to error or fraud may occur and not be detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls.

Management's Report on Internal Control

Our management is responsible for establishing and maintaining adequate internal control over financial reporting and for the assessment of the effectiveness of internal control over financial reporting. As defined by the SEC, internal control over financial reporting is a process designed by, or under the supervision of our principal executive and principal financial officers and effected by our Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with U.S. generally accepted accounting principles.

Our internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of the financial statements in accordance with U.S. generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In connection with the preparation of our annual financial statements, management has undertaken an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2007, based on criteria established in Internal Control - Integrated framework issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO Framework. Management's assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of those controls.

Based on this evaluation, management has concluded that our internal control over financial reporting is effective as of December 31, 2007.

This annual report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's independent registered public accounting firm pursuant to temporary rules of the SEC that permit the Company to provide only management's report on internal control in this report.

ITEM 8B. OTHER INFORMATION

On March 28, 2008 the employment agreement between the Company and Douglas Abel, the Company's president and chief executive officer, was extended by mutual agreement for a period of one year, through April 1, 2009.

ITEM 9. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

Information in response to this Item is incorporated herein by reference to our 2008 Proxy Statement to be filed pursuant to Regulation14A within 120days after the end of the fiscal year covered by this Form 10-K.

PART III

ITEM 10. EXECUTIVE COMPENSATION

Information in response to this Item is incorporated herein by reference to our 2008 Proxy Statement to be filed pursuant to Regulation14A within 120 days after the end of the fiscal year covered by this Form 10-K.

ITEM 11. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDERS MATTERS

Information in response to this Item is incorporated herein by reference to our 2008 Proxy Statement to be filed pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Form 10-K.

ITEM 12. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information in response to this Item is incorporated herein by reference to our 2008 Proxy Statement to be filed pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Form 10-K.

ITEM 13. EXHIBITS LIST – REVIEW WITH ANTHONY

The following documents are included or referenced in this report.

Exhibit No.	Description
2.1	Agreement and Plan of Merger among the Company, Manhattan Pharmaceuticals Acquisition Corp. and Manhattan Research Development, Inc. (formerly Manhattan Pharmaceuticals, Inc.) dated December 17, 2002 (incorporated by reference to Exhibit 2.1 from Form 8-K filed March 5, 2003).
2.2	Agreement and Plan of Merger among the Registrant, Tarpan Therapeutics, Inc. and Tarpan Acquisition Corp., dated April 1, 2005 (incorporated by reference to Exhibit 2.1 of the Registrant's Form 8-K/A filed June 15, 2005).
3.1	Certificate of incorporation, as amended through September 25, 2003 (incorporated by reference to Exhibit 3.1 to the Registrant's Form 10-QSB for the quarter ended September 30, 2003).
3.2	Bylaws, as amended to date (incorporated by reference from Registrant's registration statement on Form SB-2, as amended (File No.33-98478)).
4.1	Specimen common stock certificate (incorporated by reference from Registrant's registration statement on Form SB-2, as amended (File No.33-98478)).
4.2	Form of warrant issued by Manhattan Research Development, Inc., which automatically converted into warrants to purchase shares of the Registrant's common stock upon the merger transaction with such company (incorporated by reference to Exhibit 4.1 to the Registrant's Form 10-QSB for the quarter ended March 31, 2003).
4.3	Form of warrant issued to placement agents in connection with the Registrant's November 2003 private placement of Series A Convertible Preferred Stock and the Registrant's January 2004 private placement (incorporated by reference to Exhibit 4.18 to the Registrant's Registration Statement on Form SB-2 filed January 13, 2004 (File No. 333-111897)).
4.4	Form of warrant issued to investors in the Registrant's August 2005 private placement (incorporated by reference to Exhibit 4.1 of the Registrant's Form 8-K filed September 1, 2005).
4.5	Form of warrant issued to placement agents in the Registrant's August 2005 private placement (incorporated by reference to Exhibit 4.2 of the Registrant's Form 8-K filed September 1, 2005).
10.1	1995 Stock Option Plan, as amended (incorporated by reference to Exhibit 10.18 to the Registrant's Form 10-QSB for the quarter ended September 30, 1996).
10.2	Form of Notice of Stock Option Grant issued to employees of the Registrant from April 12, 2000 to February 21, 2003 (incorporated by reference to Exhibit 99.2 of the Registrant's Registration Statement non Form S-8 filed March 24, 1998 (File 333-48531)).

10.3	Schedule of Notices of Stock Option Grants, the form of which is attached hereto as Exhibit 4.2.
10.4	Form of Stock Option Agreement issued to employees of the Registrant from April 12, 2000 to February 21, 2003 (incorporated by reference to Exhibit 99.3 to the Registrant's Registration Statement on Form S-8 filed March 24, 1998 (File 333-48531)).
10.5	License Agreement dated on or about February 28, 2002 between Manhattan Research Development, Inc. (f/k/a Manhattan Pharmaceuticals, Inc.) and Oleoyl-Estrone Developments SL (incorporated by reference to Exhibit 10.6 to the Registrant's Amendment No. 2 to Form 10-QSB/A for the quarter ended March 31, 2003 filed on March 12, 2004).
10.6	License Agreement dated April 4, 2003 between the Registrant and NovaDel Pharma, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Amendment No. 1 to Form 10-QSB/A for the quarter ended June 30, 2003 filed on March 12, 2004).++
10.7	2003 Stock Option Plan (incorporated by reference to Exhibit 4.1 to Registrant's Registration Statement on Form S-8 filed February 17, 2004).
10.8	Employment Agreement dated April 1, 2005, between the Registrant and Douglas Abel (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K/A filed June 15, 2005).
10.9	Sublicense Agreement dated April 14, 2004 between Tarpan Therapeutics, Inc., the Registrant's wholly-owned subsidiary, and IGI, Inc. (incorporated by reference to Exhibit 10.109 to IGI Inc.'s Form 10-Q for the quarter ended March 31, 2004 (File No. 001-08568).
10.10	Form of subscription agreement between the Registrant and the investors in the Registrant's August 2005 private placement (incorporated by reference as Exhibit 10.1 to the Registrant's Form 8-K filed September 1, 2005).
10.11	Separation Agreement between the Registrant and Alan G. Harris December 21, 2007
10.12	Employment Agreement dated July 7, 2006 between the Registrant and Michael G. McGuinness (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed July 12, 2006).
10.13	Summary terms of compensation plan for Registrant's non-employee directors (incorporated by reference to Exhibit 10.1 of Registrant's Form 8-K filed February 5, 2007).
10.14	Form of Stock Option Agreement issued under the Registrant's 2003 Stock Option Plan.
10.15	Exclusive License Agreement for "Altoderm" between Thornton & Ross Ltd. and Manhattan Pharmaceuticals, Inc. dates April 3, 2007. Incorporated by reference to Exhibit 10.3 of the registrant's form 10-Q for the quarter ended June 30, 2007 filed on August 14, 2007.

10.16	Exclusive License Agreement for “Altolyn” between Thornton &Ross Ltd. and Manhattan Pharmaceuticals, Inc. dated April 3, 2007. Incorporated by reference to Exhibit 10.4 of the registrant’s form 10-Q for the quarter ended June 30, 2007 filed on August 14, 2007.
10.17	Exclusive License Agreement for “Hedrin” between Thornton &Ross Ltd. , Kerris, S.A. and Manhattan Pharmaceuticals, Inc. dated June 26, 2007. Incorporated by reference to Exhibit 10.5 of the registrant’s form 10-Q for the quarter ended June 30, 2007 filed on August 14, 2007.
10.18	Supply Agreement for “Hedrin” between Thornton & Ross Ltd. and Manhattan Pharmaceuticals, Inc. dated June 26, 2007. Incorporated by reference to Exhibit 10.6 of the registrant’s form 10-Q for the quarter ended June 30, 2007 filed on August 14, 2007.
10.19	Joint Venture Agreement between Nordic Biotech fund II K/S and Manhattan Pharmaceuticals, Inc. to develop and commercialize “Hedrin” dated January 31, 2008.
10.20	Amendment No. 1, dated February 25, 2008, to the Joint Venture Agreement between Nordic Biotech fund II K/S and Manhattan Phaarmaceuticals, Inc. to develop and commercialize “Hedrin” dated January 31, 2008.
10.21	Assignment and Contribution Agreement between Hedrin Pharmaceuticals K/S and Manhattan Pharmaceuticals, Inc. dated February 25, 2008.
10.22	Registration Rights Agreement between Nordic Biotech Venture Fund II K/S and Manhattan Pharmaceuticals, Inc. dated February 25, 2008.
10.23	Amendment to Employment Agreement by and between Manhattan Pharmaceuticals, Inc. and Douglas Abel
23.1	Consent of J.H. Cohn LLP.
31.1	Certification of Principal Executive Officer.
31.2	Certification of Principal Financial Officer.
32.1	Certifications pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

++ Confidential treatment has been granted as to certain portions of this exhibit pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES .

Fees Billed to the Company by Its Independent Auditors – MIKE TO UPDATE

The following is a summary of the fees billed to us by J.H. Cohn LLP, our independent registered public accounting firm for professional services rendered for fiscal years ended December 31, 2007 and 2006:

Fee Category	J.H. Cohn LLP	
	Fiscal 2007 Fees	Fiscal 2006 Fees
Audit Fees	$ 103,940	$ 100,111
Audit-Related Fees (1)	11,520	22,943
Tax Fees (2)	18,708	21,165
All Other Fees (3)	-	-
Total Fees	$ 134,168	$ 144,219

(1) Audit-Related Fees consist principally of assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements but not reported under the caption "Audit Fees." These fees include review of registration statements.

(2) Tax Fees consist of fees for tax compliance, tax advice and tax planning.

(3) All Other Fees consist of aggregate fees billed for products and services provided by the independent registered public accounting firm, other than those disclosed above.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Registered Public Accounting Firm

At present, our audit committee approves each engagement for audit or non-audit services before we engage our independent registered public accounting firm to provide those services. Our audit committee has not established any pre-approval policies or procedures that would allow our management to engage our independent registered public accounting firm to provide any specified services with only an obligation to notify the audit committee of the engagement for those services. None of the services provided by our independent registered public accounting firm for fiscal 2007 was obtained in reliance on the waiver of the pre-approval requirement afforded in SEC regulations.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act, of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on March 31, 2008.

Manhattan Pharmaceuticals, Inc.

By: /s/ Douglas Abel

Douglas Abel
Chief Executive Officer and President

In accordance with the Securities Exchange Act, this report has been signed below by the following persons on behalf of Manhattan Pharmaceuticals, Inc. and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Douglas Abel Douglas Abel	Chief Executive Officer, President and Director (principal executive officer)	March 31, 2008
/s/ Michael G. McGuinness Michael G. McGuinness	Secretary and Chief Financial Officer (principal accounting and financial officer)	March 31, 2008
/s/ Neil Herskowit Neil Herskowitz	Director	March 31, 2008
/s/ Malcolm Hoenlei Malcolm Hoenlein	Director	March 31, 2008
/s/ Timothy McInerne Timothy McInerney	Director	March 31, 2008
/s/ Richard Steinhart Richard Steinhart	Director	March 31, 2008
/s/ Michael Weiser Michael Weiser	Director	March 31, 2008

Index to Consolidated Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Manhattan Pharmaceuticals, Inc.

We have audited the accompanying consolidated balance sheets of Manhattan Pharmaceuticals, Inc. and Subsidiaries (a development stage company) as of December 31, 2007 and 2006, and the related consolidated statements of operations, stockholders' equity (deficiency) and cash flows for the years then ended, and for the period from August 6, 2001 (date of inception) to December 31, 2007. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Manhattan Pharmaceuticals, Inc. and Subsidiaries as of December 31, 2007 and 2006, and their consolidated results of operations and cash flows for the years then ended and for the period from August 6, 2001 (date of inception) to December 31, 2007, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has incurred net losses and negative cash flows from operating activities from its inception through December 31, 2007 and has an accumulated deficit and negative working capital as of December 31, 2007. These matters raise substantial doubt about the Company’s ability to continue as a going concern. Management’s plan regarding these matters are also described in Note 2. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

As discussed in Note 3 to the consolidated financial statements, the Company changed the manner in which it accounts for share-based compensation in fiscal 2006.

/s/ J.H. Cohn LLP

Roseland, New Jersey
March 28, 2008

MANHATTAN PHARMACEUTICALS, INC. and SUBSIDIARIES
(A Development Stage Company)

Consolidated Balance Sheets

	December 31, 2007	December 31, 2006
Assets		
Current assets:		
Cash and cash equivalents	$ 649,686	$ 3,029,118
Prepaid expenses	215,852	264,586
Total current assets	865,538	3,293,704
Property and equipment, net	44,533	83,743
Other assets	70,506	70,506
Total assets	$ 980,577	$ 3,447,953
Liabilities and Stockholders' Equity (Deficiency)		
Current liabilities:		
Accounts payable	$ 1,279,485	$ 1,393,296
Accrued expenses	592,177	550,029
Total liabilities	1,871,662	1,943,325
Commitments and contingencies		
Stockholders' equity (deficiency):		
Preferred stock, $.001 par value. Authorized 1,500,000 shares; no shares issued and outstanding at December 31, 2007 and 2006		
Common stock, $.001 par value. Authorized 150,000,000 shares; 70,624,232 and 60,120,038 shares issued and outstanding at December 31, 2007 and December 31, 2006, respectively	70,624	60,120
Additional paid-in capital	54,037,361	44,411,326
Deficit accumulated during the development stage	(54,999,070)	(42,966,818)
Total stockholders' equity (deficiency)	(891,085)	1,504,628
Total liabilities and stockholders' equity (deficiency)	$ 980,577	$ 3,447,953

See accompanying notes to consolidated financial statements.

MANHATTAN PHARMACEUTICALS, INC. and SUBSIDIARIES
(A Development Stage Company)

Consolidated Statements of Operations

	Years ended December 31,		Cumulative period from August 6, 2001 (inception) to December 31,
	2007	2006	2007
Revenue	$ —	$ —	$ —
Costs and expenses:			
Research and development	8,535,687	6,172,845	26,489,043
General and administrative	3,608,270	3,827,482	13,852,363
In-process research and development charge	—	—	11,887,807
Impairment of intangible assets	—	—	1,248,230
Loss on disposition of intangible assets	—	—	1,213,878
Total operating expenses	12,143,957	10,000,327	54,691,321
Operating loss	(12,143,957)	(10,000,327)	(54,691,321)
Other (income) expense:			
Interest and other income	(112,181)	(307,871)	(821,897)
Interest expense	476	1,665	26,034
Realized (gain)/loss on sale of marketable equity securities	—	1,002	(76,032)
Total other income	(111,705)	(305,204)	(871,895)
Net loss	(12,032,252)	(9,695,123)	(53,819,426)
Preferred stock dividends (including imputed amounts)	—	—	(1,179,644)
Net loss applicable to common shares	$ (12,032,252)	$ (9,695,123)	$ (54,999,070)
Net loss per common share:			
Basic and diluted	$ (0.18)	$ (0.16)	
Weighted average shares of common stock outstanding:			
Basic and diluted	68,015,075	60,112,333	

See accompanying notes to consolidated financial statements.

MANHATTAN PHARMACEUTICALS, INC. and SUBSIDIARIES
(A Development Stage Company)

Consolidated Statement of Stockholders' Equity (Deficiency)

	Series A convertible preferred stock	Series A convertible preferred stock	Common stock	Common stock	Additional paid-in capital	Subscription receivable	Deficit accumulated during development stage	Dividends payable in Series A preferred stock	Accumulated other comprehensive income (loss)	Unearned consulting services	Total stockholders' equity (deficiency)
	Shares	Amount	Shares	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Stock issued at $0.0004 per share for subscription receivable	—	$ —	10,167,741	$ 10,168	$ (6,168)	$ (4,000)	$ —	$ —	$ —	$ —	$ —
Net loss	—	—	—	—	—	—	(56,796)	—	—	—	(56,796)
Balance at December 31, 2001	—	—	10,167,741	10,168	(6,168)	(4,000)	(56,796)	—	—	—	(56,796)
Proceeds from subscription receivable	—	—	—	—	—	4,000	—	—	—	—	4,000
Stock issued at $0.0004 per share for license rights	—	—	2,541,935	2,542	(1,542)	—	—	—	—	—	1,000
Stock options issued for consulting services	—	—	—	—	60,589	—	—	—	—	(60,589)	—
Amortization of unearned consulting services	—	—	—	—	—	—	—	—	—	22,721	22,721
Common stock issued at $0.63 per share, net of expenses	—	—	3,043,332	3,043	1,701,275	—	—	—	—	—	1,704,318
Net loss	—	—	—	—		—	(1,037,320)	—	—	—	(1,037,320)
Balance at December 31, 2002	—	—	15,753,008	15,753	1,754,154	—	(1,094,116)	—	—	(37,868)	637,923
Common stock issued at $0.63 per share, net of expenses	—	—	1,321,806	1,322	742,369	—	—	—	—	—	743,691
Effect of reverse acquisition	—	—	6,287,582	6,287	2,329,954	—	—	—	—	—	2,336,241
Amortization of unearned consulting costs	—	—	—	—	—	—	—	—	—	37,868	37,868
Unrealized loss on short-term investments	—	—	—	—	—	—	—	—	(7,760)	—	(7,760)
Payment for fractional shares for stock combination	—	—	—	—	(300)	—	—	—	—	—	(300)
Preferred stock issued at $10 per share, net of expenses	1,000,000	1,000	—	—	9,045,176	—	—	—	—	—	9,046,176
Imputed preferred stock dividend					418,182	—	(418,182)	—			—
Net loss	—	—	—	—	—	—	(5,960,907)	—	—	—	(5,960,907)
Balance at December 31, 2003	1,000,000	1,000	23,362,396	23,362	14,289,535	—	(7,473,205)	—	(7,760)	—	6,832,932
Exercise of stock options	—	—	27,600	27	30,073	—	—	—	—	—	30,100
Common stock issued at $1.10, net of expenses	—	—	3,368,952	3,369	3,358,349	—	—	—	—	—	3,361,718
Preferred stock dividend accrued	—	—	—	—	—	—	(585,799)	585,799	—	—	—
Preferred stock dividends paid by issuance of shares	24,901	25	—	—	281,073	—	—	(282,388)	—	—	(1,290)
Conversion of preferred stock to common stock at $1.10 per share	(170,528	(171	1,550,239	1,551	(1,380)	—	—	—	—	—	—
Warrants issued for consulting services	—	—	—	—	125,558	—	—	—	—	(120,968)	4,590
Amortization of unearned consulting costs	—	—	—	—	—	—	—	—	—	100,800	100,800
Unrealized gain on short-term investments and reversal of unrealized loss on short-term investments	—	—	—	—	—	—	—	—	20,997	—	20,997
Net loss	—	—	—	—	—	—	(5,896,031)	—	—	—	(5,896,031)
Balance at December 31, 2004	854,373	854	28,309,187	28,309	18,083,208	—	(13,955,035)	303,411	13,237	(20,168)	4,453,816

MANHATTAN PHARMACEUTICALS, INC. and SUBSIDIARIES
(A Development Stage Company)

Consolidated Statement of Stockholders' Equity (Deficiency)

	Series A convertible preferred stock	Series A convertible preferred stock	Common stock	Common stock	Additional paid-in capital	Subscription receivable	Deficit accumulated during development stage	Dividends payable in Series A preferred stock	Accumulated other comprehensive income (loss)	Unearned consulting services	Total stockholders' equity (deficiency)
	Shares	Amount	Shares	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
Common stock issued at $1.11 and $1.15, net of expenses	—	—	11,917,680	11,918	12,238,291	—	—	—	—	—	12,250,209
Common stock issued to vendor at $1.11 per share in satisfaction of accounts payable	—	—	675,675	676	749,324	—	—	—	—	—	750,000
Exercise of stock options	—	—	32,400	33	32,367	—	—	—	—	—	32,400
Exercise of warrants	—	—	279,845	279	68,212	—	—	—	—	—	68,491
Preferred stock dividend accrued	—	—	—	—	—	—	(175,663)	175,663	—	—	—
Preferred stock dividends paid by issuance of shares	41,781	42	—	—	477,736	—	—	(479,074)	—	—	(1,296)
Conversion of preferred stock to common stock at $1.10 per share	(896,154)	(896)	8,146,858	8,147	(7,251)	—	—	—	—	—	—
Share-based compensation	—	—	—	—	66,971	—	—	—	—	20,168	87,139
Reversal of unrealized gain on short-term investments	—	—	—	—	—	—	—	—	(12,250)	—	(12,250)
Stock issued in connection with acquisition of Tarpan Therapeutics, Inc.	—	—	10,731,052	10,731	11,042,253	—	—	—	—	—	11,052,984
Net loss	—	—	—	—	—	—	(19,140,997)	—	—	—	(19,140,997)
Balance at December 31, 2005	—	—	60,092,697	60,093	42,751,111	—	(33,271,695)	—	987	—	9,540,496
Cashless exercise of warrants	—	—	27,341	27	(27)	—	—	—	—	—	—
Share-based compensation	—	—	—	—	1,675,499	—	—	—	—	—	1,675,499
Unrealized loss on short-term investments	—	—	—	—	—	—	—	—	(987)	—	(987)
Costs associated with private placement	—	—	—	—	(15,257)	—	—	—	—	—	(15,257)
Net loss	—	—	—	—	—	—	(9,695,123)	—	—	—	(9,695,123)
Balance at December 31, 2006	—	—	60,120,038	60,120	44,411,326	—	(42,966,818)	—	—	—	1,504,628
Common stock issued at $0.84 and $0.90 per shares, net of expenses	—	—	10,185,502	10,186	7,841,999	—	—	—	—	—	7,852,185
Common stock issued to directors at $0.72 per share in satisfaction of accounts payable	—	—	27,776	28	19,972	—	—	—	—	—	20,000
Common stock issued to in connection with in-licensing agreement at $0.90 per share	—	—	125,000	125	112,375	—	—	—	—	—	112,500
Common stock issued to in connection with in-licensing agreement at $0.80 per share	—	—	150,000	150	119,850	—	—	—	—	—	120,000
Exercise of warrants	—	—	10,327	15	7,219	—	—	—	—	—	7,234
Cashless exercise of warrants	—	—	5,589	—	(6)	—	—	—	—	—	(6)
Share-based compensation	—	—	—	—	1,440,956	—	—	—	—	—	1,440,956
Warrants issued for consulting					83,670						83,670
Net loss	—	—	—	—	—	—	(12,032,252)	—	—	—	(12,032,252)
Balance at December 31, 2007	—	—	$ 70,624,232	70,624	$ 54,037,361	$ —	$ (54,999,070)	$ —	$ —	$ —	$ (891,085)

See accompanying notes to consolidated financial statements.

MANHATTAN PHARMACEUTICALS, INC. and SUBSIDIARIES
(A Development Stage Company)

Consolidated Statements of Cash Flows

	Years ended December 31,		Cumulative period from August 6, 2001 (inception) to December 31,
	2007	2006	2007
Cash flows from operating activities:			
Net loss	$ (12,032,252)	$ (9,695,123)	$ (53,819,426)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	1,440,956	1,675,499	3,364,983
Shares issued in connection with in-licensing agreement	232,500	—	232,500
Warrants issued to consultant	83,670	—	83,670
Amortization of intangible assets	—	—	145,162
(Gain)/loss on sale of marketable equity securities	—	1,002	(76,032)
Depreciation	48,345	60,186	195,825
Non cash portion of in-process research and development charge	—	—	11,721,623
Loss on impairment and disposition of intangible assets	—	—	2,462,108
Other	—	—	5,590
Changes in operating assets and liabilities, net of acquisitions:			
Decrease (increase) in prepaid expenses and other current assets	48,734	(69,810)	(157,607)
Increase in other assets	—	—	(70,506)
Increase (decrease) in accounts payable	(93,812)	(224,193)	1,699,698
Increase in accrued expenses	42,148	501,701	51,856
Net cash used in operating activities	(10,229,711)	(7,750,738)	(34,160,556)
Cash flows from investing activities:			
Purchase of property and equipment	(9,134)	(37,052)	(230,635)
Cash paid in connection with acquisitions	—	—	(26,031)
Net cash provided from the purchase and sale of short-term investments	—	1,005,829	435,938
Proceeds from sale of license	—	—	200,001
Net cash (used in) provided by investing activities	(9,134)	968,777	379,273
Cash flows from financing activities:			
Repayments of notes payable to stockholders	—	—	(884,902)
Proceeds (costs) related to sale of common stock, net	7,852,185	(15,257)	25,896,262
Proceeds from sale of preferred stock, net	—	—	9,046,176
Proceeds from exercise of warrants and stock options	7,228	—	138,219
Other, net	—	—	235,214
Net cash provided by (used in) financing activities	7,859,413	(15,257)	34,430,969
Net (decrease) increase in cash and cash equivalents	(2,379,432)	6,797,218	649,686
Cash and cash equivalents at beginning of period	3,029,118	9,826,336	—
Cash and cash equivalents at end of period	$ 649,686	$ 3,029,118	$ 649,686
Supplemental disclosure of cash flow information:			
Interest paid	$ 475	$ 1,665	$ 26,033
Supplemental disclosure of noncash investing and financing activities:			

Common stock issued in satisfaction of accounts payable	$ 20,000	$ —	$ 770,000
Imputed preferred stock dividend	—	—	418,182
Preferred stock dividends accrued	—	—	761,462
Conversion of preferred stock to common stock	—	—	1,067
Preferred stock dividends paid by issuance of shares	—	—	759,134
Issuance of common stock for acquisitions	—	—	13,389,226
Issuance of common stock in connection with in-licensing agreement	232,500		232,500
Marketable equity securities received in connection with sale of license	—	—	359,907
Warrants issued to consultant	83,670	—	83,670
Net liabilities assumed over assets acquired in business combination	—	—	(675,416)
Cashless exercise of warrants	6	27	33

See accompanying notes to consolidated financial statements.

(1) Merger and Nature of Operations

2003 Reverse Merger

On February 21, 2003, the Company (formerly known as "Atlantic Technology Ventures, Inc.") completed a reverse acquisition of privately held Manhattan Research Development, Inc. ("Manhattan Research") (formerly Manhattan Pharmaceuticals, Inc.), a Delaware corporation. At the effective time of the merger, the outstanding shares of common stock of Manhattan Research automatically converted into shares of the Company's common stock representing 80 percent of the Company's outstanding voting stock after giving effect to the merger. Since the stockholders of Manhattan Research received the majority of the voting shares of the Company, the merger was accounted for as a reverse acquisition whereby Manhattan Research was the accounting acquirer (legal acquiree) and the Company was the accounting acquiree (legal acquirer) under the purchase method of accounting. In connection with the merger, the Company changed its name from "Atlantic Technology Ventures, Inc." to "Manhattan Pharmaceuticals, Inc." The results of the combined operations have been included in the Company's financial statements since February 2003.

As described above, the Company resulted from the February 21, 2003 reverse merger between Atlantic Technology Ventures, Inc. ("Atlantic"), which was incorporated on May 18, 1993, and privately-held Manhattan Research Development, Inc., incorporated on August 6, 2001. The Company was incorporated in the State of Delaware. In connection with the merger, the former stockholders of Manhattan Research received a number of shares of Atlantic's common stock so that following the merger they collectively owned 80 percent of the outstanding shares. Upon completion of the merger, Atlantic changed its name to Manhattan Pharmaceuticals, Inc. and thereafter adopted the business of Manhattan Research.

The Company is a clinical stage biopharmaceutical company focused on developing and commercializing innovative pharmaceutical therapies for underserved patient populations. The Company acquires rights to these technologies by licensing or otherwise acquiring an ownership interest, funding their research and development and eventually either bringing the technologies to market or out-licensing. We currently have four product candidates in development: Hedrin™, a novel, non-insecticide treatment of pediculitis (head lice); Topical PTH (1-34) for the treatment of psoriasis; Altoderm™ (topical cromolyn sodium) for the treatment of pruritus associated with dermatologic conditions including atopic dermatitis; and Altolyn™ (oral tablet cromolyn sodium) for the treatment of mastocytosis. During 2007, the Company discontinued development of Oleoyl-estrone and Propofol Lingual Spray.

Acquisition of Tarpan Therapeutics, Inc.

On April 1, 2005, the Company entered into an Agreement and Plan of Merger (the "Agreement") with Tarpan Therapeutics, Inc., a Delaware corporation ("Tarpan"), and Tarpan Acquisition Corp., a Delaware corporation and wholly-owned subsidiary of the Company ("TAC"). Under the Agreement TAC merged with and into Tarpan, with Tarpan remaining as the surviving corporation and a wholly-owned subsidiary of the Company (the "Merger"). The Merger was completed April 1, 2005. In consideration for their shares of Tarpan capital stock and in accordance with the Agreement, the stockholders of Tarpan received 10,731,052 shares of the Company's common stock such that, upon the effective time of the Merger, the Tarpan stockholders collectively receivedapproximately 20 percent of the Company's then outstanding common stock on a fully-diluted basis. Based on the five day average price of the Company's common stock of $1.03 per share, the value of the shares issued totaled $11,052,984. In addition, there were $166,184 of acquisition costs. At the time of the Merger, Tarpan had outstanding indebtedness of $651,000 (inclusive of 5% accrued interest) resulting from a series of promissory notes issued to Paramount BioCapital Investments, LLC and Horizon BioMedical Ventures, LLC, both of which are owned or controlled by Dr. Lindsay Rosenwald. The notes were repaid in full by the Company in two installments on April 15, 2005 and September 6, 2005.

The acquisition of Tarpan has been accounted for by the Company under the purchase method of accounting in accordance with Statement of Financial Accounting Standards ("SFAS") No. 141 "Business Combinations". Under the purchase method, assets acquired and liabilities assumed by the Company are recorded at their estimated fair values and the results of operations of the acquired company are consolidated with those of the Company from the date of acquisition.

Several of Tarpan's former stockholders were directors or significant stockholders of the Company at the time of the transaction. Dr. Rosenwald and various trusts established for the benefit of Dr. Rosenwald and members of his immediate family collectively beneficially owned approximately 46 percent of Tarpan's common stock and beneficially owned approximately 26 percent of the Company's common stock at the time of the transaction. In addition, Joshua Kazam, David Tanen, Dr. Michael Weiser and Timothy McInerney, all of whom were members of the Company's board of directors at the time of the transaction, collectively owned approximately 13.4 percent of Tarpan's outstanding common stock. At the time of the transaction, Dr. Weiser and Mr. McInerney were employed by Paramount BioCapital, Inc., an entity owned and controlled by Dr. Rosenwald. As a result of such relationships between the Company and Tarpan, the Company's board of directors established a special committee to consider and approve the Agreement. The members of the special committee did not have any prior relationship with Tarpan.

The excess purchase price paid by the Company to acquire the net assets of Tarpan was allocated to acquired in-process research and development totaling $11,887,807. As required by Financial Accounting Standards Board ("FASB") Interpretation No. 4, "Applicability of FASB Statement No. 2 to Business combinations Accounted for by the Purchase Method" ("FIN 4"), the Company recorded a charge in its consolidated statement of operations for the year ended December 31, 2005 for the in-process research and development. Tarpan was a biopharmaceutical company engaged in the development of the Phase II pharmaceutical product candidate, PTH (1-34).

(2) Liquidity and Basis of Presentation

Liquidity

The Company incurred a net loss of $12,032,252 and negative cash flows from operating activities of $10,229,711 for the year ended December 31, 2007 and a net loss of $9,695,123 and negative cash flows from operating activities of $7,750,738 for the year ended December 31, 2006. The net loss applicable to common shares from date of inception, August 6, 2001, to December 31, 2007 amounts to $54,999,070.

The Company received approximately $7.9 million net from a private placement of common stock and warrants in March 2007. This private placement is more fully described in Note 5.

The Company received approximately $2.0 million from a joint venture agreement in February 2008. This joint venture agreement is more fully described in Note 12.

Management believes that the Company will continue to incur net losses through at least December 31, 2008 and for the foreseeable future thereafter. Based on the resources of the Company available at December 31, 2007 and the net proceeds received from the February 2008 joint venture agreement management does not believe that the Company has sufficient capital to fund its operations through 2008. Management believes that the Company will need additional equity or debt financing or will need to generate revenues through licensing of its products or entering into strategic alliances to be able to sustain its operations through 2008. Furthermore, we will need additional financing thereafter to complete development and commercialization of our products. There can be no assurances that we can successfully complete development and commercialization of our products.

These matters raise substantial doubt about the Company's ability to continue as a going concern. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

The Company's continued operations will depend on its ability to raise additional funds through various potential sources such as equity and debt financing, collaborative agreements, strategic alliances and its ability to realize the full potential of its technology in development. Additional funds may not become available on acceptable terms, and there can be no assurance that any additional funding that the Company does obtain will be sufficient to meet the Company's needs in the long-term.

(3) Summary of Significant Accounting Policies

Basis of Presentation

The Company has not generated any revenue from its operations and, accordingly, the consolidated financial statements have been prepared in accordance with the provisions of SFAS No.7, "Accounting and Reporting by Development Stage Enterprises."

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. All of the Company's subsidiaries were dissolved as of December 31, 2006.

Use of Estimates

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

Research and Development

All research and development costs are expensed as incurred and include costs of consultants who conduct research and development on behalf of the Company and its subsidiaries. Costs related to the acquisition of technology rights and patents for which development work is still in process are expensed as incurred and considered a component of research and development costs.

The Company often contracts with third parties to facilitate, coordinate and perform agreed upon research and development of a new drug. To ensure that research and development costs are expensed as incurred, the Company records monthly accruals for clinical trials and preclinical testing costs based on the work performed under the contracts.

These contracts typically call for the payment of fees for services at the initiation of the contract and/or upon the achievement of certain milestones. This method of payment often does not match the related expense recognition resulting in either a prepayment, when the amounts paid are greater than the related research and development costs expensed, or an accrued liability, when the amounts paid are less than the related research and development costs expensed.

Acquired in-process research and development

Costs to acquire in-process research and development projects and technologies which have no alternative future use at the date of acquisition are expensed.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between financial statement carrying amounts of existing assets and liabilities, and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. 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. A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Computation of Net Loss per Common Share

Basic net loss per common share is calculated by dividing net loss applicable to common shares by the weighted-average number of common shares outstanding for the period. Diluted net loss per common share is the same as basic net loss per common share, since potentially dilutive securities from stock options, stock warrants and convertible preferred stock would have an antidilutive effect because the Company incurred a net loss during each period presented. The amounts of potentially dilutive securities excluded from the calculation were 16,903,292 and 13,383,229 shares at December 31, 2007 and 2006, respectively.

Share-Based Compensation

The Company has stockholder-approved stock incentive plans for employees, directors, officers and consultants. Prior to January 1, 2006, the Company accounted for the employee, director and officer plans using the intrinsic value method under the recognition and measurement provisions of Accounting Principles Board (“APB”) Opinion No.25, “Accounting for Stock Issued to Employees” and related interpretations, as permitted by Statement of Financial Accounting Standards (“SFAS” or “Statement”) No. 123, “Accounting for Stock-Based Compensation.”

Effective January 1, 2006, the Company adopted SFAS No. 123(R), “Share-Based Payment,” (“Statement 123(R)”) for employee options using the modified prospective transition method. Statement 123(R) revised Statement 123 to eliminate the option to use the intrinsic value method and required the Company to expense the fair value of all employee options over the vesting period. Under the modified prospective transition method, the Company recognized compensation cost for the years ended December 31, 2007 and 2006 which includes a) period compensation cost related to share-based payments granted prior to, but not yet vested, as of January 1, 2006, based on the grant date fair value estimated in accordance with the original provisions of Statement 123; and b) period compensation cost related to share-based payments granted on or after January 1, 2006, based on the grant date fair value estimated in accordance with Statement 123(R). In accordance with the modified prospective method, the Company has not restated prior period results.

The Company recognizes compensation expense related to stock option grants on a straight-line basis over the vesting period. For the years ended December 31, 2007 and 2006, the Company recognized share-based employee compensation cost of $1,447,560 and $1,670,661, respectively, in accordance with Statement 123(R). $890,124 of the $1,447,560 of expense recognized in 2007 resulted from the grant of stock options to officers, directors, and employees of the Company on or prior to December 31, 2005. $1,500,690 of the $1,670,661 of the expense recognized in 2006 resulted from the grants of stock options to officers, directors and employees of the Company on or prior to December 31, 2005. The balances for the years ended December 31, 2007 and 2006 of $557,436 and $169,971, respectively, relate to the granting of stock options to employees and officers on or after January 1, 2006. The Company did not capitalize any share-based compensation cost.

Options granted to consultants and other non-employees are accounted for in accordance with 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". Accordingly, such options are recorded at fair value at the date of grant and subsequently adjusted to fair valueat the end of each reporting perioduntil such options vest, and the fair value of the options, as adjusted, is amortized to consulting expenseover the related vesting period. As a result of adjusting consultant and other non-employee options to fair value as of December 31, 2007 and 2006 respectively, net of amortization, the Company recognized an increase to general and administrative and research and development expenses of $6,604 for the year ended December 31, 2007 and a reduction to general and administrative and research and development expenses of $4,838 for the year ended December 31, 2006.

The Company has allocated share-based compensation costs to general and administrative and research and development expenses as follows:

	2007	2006
General and administrative expense:		
Share-based employee compensation cost	$ 891,897	$ 1,176,618
Share-based consultant and non-employee cost	10,550	(29,842)
	$ 902,447	$ 1,146,776
Research and development expense		
Share-based employee compensation cost	$ 555,663	$ 494,043
Share-based consultant and non-employee cost	(17,154)	34,680
	$ 538,509	$ 528,723
Total share-based cost	$ 1,440,956	$ 1,675,499

As a result of adopting Statement 123(R), net loss for the year ended December 31, 2006 was greater than if the Company had continued to account for share-based compensation under APB 25 by approximately $1,671,000. The effect of adopting Statement 123 (R) on basic and diluted earnings per share for the year ended December 31, 2006 was $0.03 per share.

To compute compensation expense in 2007 and 2006 the Company estimated the fair value of each option award on the date of grant using the Black-Scholes model. The Company based the expected volatility assumption on a volatility index of peer companies as the Company did not have a sufficient number of years of historical volatility of its common stock for the application of Statement 123 (R). The expected term of options granted represents the period of time that options are expected to be outstanding. The Company estimated the expected term of stock options by the simplified method as prescribed in Staff Accounting Bulletin No. 107. The expected forfeiture rates are based on the historical employee forfeiture experiences. To determine the risk-free interest rate, the Company utilized the U.S. Treasury yield curve in effect at the time of grant with a term consistent with the expected term of the Company's awards. The Company has not declared a dividend on its common stock since its inception and has no intentions of declaring a dividend in the foreseeable future and therefore used a dividend yield of zero.

The following table shows the weighted average assumptions the Company used to develop the fair value estimates for the determination of the compensation charges in 2007 and 2006:

	2007	2006
Expected volatility	93%	84% - 98%
Dividend yield	—	—
Expected term (in years)	5 - 10	5 - 10
Risk-free interest rate	3.6% - 4.9%	4.45% - 5.1%
Forfeiture rate	7%	4%

Financial Instruments

At December 31, 2007 and 2006, the fair values of cash and cash equivalents and accounts payable approximate their carrying values due to the short-term nature of these instruments.

Cash and Cash Equivalents

Cash equivalents consist of cash or short term investments with original maturities at the time of purchase of three months or less.

Property and Equipment

Property and equipment are stated at cost. Depreciation is provided using the straight-line method over estimated useful lives. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts, and any resulting gain or loss is recognized in operations for the period. Amortization of leasehold improvements is calculated using the straight-line method over the remaining term of the lease or the life of the asset, whichever is shorter. The cost of repairs and maintenance is charged to operations as incurred; significant renewals and improvements are capitalized.

Short-term Investments

Short-term investments are carried at market value since they are marketable and considered available-for-sale. The Company did not have any short-term investments at December 31, 2007 or 2006.

New Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements" ("SFAS 157"), which defines fair value, establishes a framework for measuring fair value in accordance with generally accepted accounting principles ("GAAP") in the United States of America, and expands disclosures about fair value measurements. SFAS 157 does not require any new fair value measurements under GAAP and is effective for fiscal years beginning after November 15, 2007. The Company will adopt SFAS 157 as of January 1, 2008. The effects of adoption will be determined by the types of instruments carried at fair value in our financial statements at the time of adoption, as well as the method utilized to determine their fair values prior to adoption. Based on the Company's current use of fair value measurements, SFAS 157 is not expected to have a material effect on its results of operations or financial position.

In February 2007, the FASB issued SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities," (SFAS 159), which provides companies with an option to report selected financial assets and liabilities at fair value. SFAS 159 establishes presentation and disclosure requirements designed to facilitate comparisons between companies that choose different measurement attributes for similar types of assets and liabilities and highlights the effect of a company's choice to use fair value on its earnings. It also requires a company to display the fair value of those assets and liabilities for which it has chosen to use fair value on the face of the balance sheet. SFAS 159 will be effective beginning January 1, 2008 and is not expected to have a material impact on the Company's consolidated financial statements.

In June 2007, the FASB issued EITF No. 07-3, "Accounting for Nonrefundable Advance Payments for Goods or Services Received for use in Future Research and Development Activities" ("EITF No. 07-3"). EITF No. 07-3 states that nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities should be deferred and capitalized. Such amounts should be recognized as an expense as the related goods are delivered or the related services are performed. Entities should continue to evaluate whether they expect the goods to be delivered or services to be rendered. If an entity does not expect the goods to be delivered or services to be rendered, the capitalized advance payment should be charged to expense. The provisions of EITF No. 07-3 will be effective for the Company on a prospective basis beginning January 1, 2008, evaluated on a contract by contract basis and is not expected to have a material impact on the Company's consolidated financial statements.

In December 2007, the FASB issued SFAS No. 141(R), a revised version of SFAS No. 141, " Business Combinations." The revision is intended to simplify existing guidance and converge rulemaking under U.S. generally accepted accounting principles with international accounting standards. This statement applies prospectively to business combinations where the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. An entity may not apply it before that date. The Company is currently evaluating the impact of the provisions of the revision on its consolidated results of operations and financial condition.

In December 2007, the FASB issued SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements" ("SFAS 160"), which will require noncontrolling interests (previously referred to as minority interests) to be treated as a separate component of equity, not as a liability or other item outside of permanent equity. This statement applies to the accounting for noncontrolling interests and transactions with noncontrolling interest holders in consolidated financial statements. SFAS 160 will be applied prospectively to all noncontrolling interests, including any that arose before the effective date except that comparative period information must be recast to classify noncontrolling interests in equity, attribute net income and other comprehensive income to noncontrolling interests, and provide other disclosures required by SFAS 160. SFAS 160 is effective for periods beginning on or after December 15, 2008. We are currently evaluating the impact that SFAS 160 will have on our consolidated financial statements.

The FASB and the Securities and Exchange Commission had issued certain other accounting pronouncements as of December 31, 2007 that will become effective in subsequent periods; however, the Company does not believe that any of those pronouncements would have significantly affected its financial accounting measures or disclosures had they been in effect during the years ended December 31, 2007 and 2006 and for the period from August 6, 2001 (inception) to December 31, 2007 or that will have a significant effect at the time they become effective.

(4) Property and Equipment

Property and equipment consists of the following at December 31:

	2007	2006
Property and equipment	$ 226,010	$ 244,040
Less accumulated depreciation	(181,477)	(160,297)
Net property and equipment	$ 44,533	$ 83,743

(5) Stockholders' Equity

As described in Note 1 the Company completed a reverse acquisition of privately held Manhattan Research Development, Inc. on February 21, 2003. In July 2003, the Board of Directors adopted a resolution authorizing an amendment to the certificate of incorporation providing for a 1-for-5 combination of the Company's common stock. The resolution approving the 1-for-5 combination was thereafter consented to in writing by holders of a majority of the Company's outstanding common stock and became effective in September 2003. Accordingly, all share and per share information in these consolidated financial statements has been restated to retroactively reflect the 1-for-5 combination and the effects of the Reverse Merger.

2001

During 2001, the Company issued 10,167,741 shares of its common stock to investors for subscriptions receivable of $4,000 or $0.0004 per share. During 2002, the Company received the $4,000 subscription receivable.

2002

During 2002, the Company issued 2,541,935 shares of its common stock to Oleoyl-estrone Developments, S.L. ("OED") in conjunction with a license agreement (the OED License Agreement"), as more fully described in Note 8. We valued these shares at their then estimated fair value of $1,000.

During 2002, the Company issued options to purchase 1,292,294 shares of its common stock in conjunction with several consulting agreements. The fair value of these options was $60,589. The Company expensed $22,721 in 2002 and $37,868 in 2003.

During 2002 and 2003 the Company completed two private placements. During 2002, the Company issued 3,043,332 shares of its common stock at $0.63 per share and warrants to purchase 304,333 of its common stock in a private placement. After deducting commissions and other expenses relating to the private placement, the Company received net proceeds of $1,704,318.

2003

During 2003, the Company issued an additional 1,321,806 shares of its common stock at $0.63 per share and warrants to purchase 132,181 shares of its common stock. After deducting commissions and other expenses relating to the private placement, the Company received net proceeds of $743,691. In connection with these private placements, the Company issued to the placement agent warrants to purchase 1,658,753 shares of its common stock.

As described in Note 1, during 2003, the Company completed a reverse acquisition. The Company issued 6,287,582 shares of its common stock with a value of $2,336,241 in the reverse acquisition.

In November 2003, the Company issued 1,000,000 shares of its newly-designated Series A Convertible Preferred Stock (the "Convertible Preferred") at a price of $10 per share in a private placement. After deducting commissions and other expenses relating to the private placement, the Company received net proceeds of $9,046,176. Each share of Convertible Preferred was convertible at the holder's election into shares of the Company's common stock at a conversion price of $1.10 per share. The conversion price of the Convertible Preferred was less than the market value of the Company's common stock on the date of issuance. Accordingly for the year ended December 31, 2003 the Company recorded a separate charge to deficit accumulated during development stage for the beneficial conversion feature associated with the issuance of Convertible Preferred of $418,182. The Convertible Preferred had a payment-in-kind annual dividend of five percent. Maxim Group, LLC of New York, together with Paramount Capital, Inc., a related party, acted as the placement agents in connection with the private placement.

2004

During 2004, the Company issued 3,368,952 shares of its common stock at a price of $1.10 per share in a private placement. After deducting commissions and other expenses relating to the private placement, the Company received net proceeds of $3,361,718. In connection with the common stock private placement and the Convertible Preferred private placement, the Company issued to the placement agents a warrant to purchase 1,235,589 shares of its common stock.

During 2004 the Company recorded a dividend on the Convertible Preferred of $585,799. 24,901 shares of Convertible Preferred were issued in payment of $282,388 of this in-kind dividend. Also during 2004, 170,528 shares of Convertible Preferred were converted into 1,550,239 shares of the Company's common stock at $1.10 per share.

During 2004 the Company issued 27,600 shares of common stock upon the exercise of stock options.

During 2004, the Company issued warrant to purchase 110,000 shares of its common stock in conjunction with three consulting agreements. The fair value of these warrants was $120,968. The Company expensed $100,800 in 2004 and $20,168 in 2005.

2005

In August 2005, the Company issued 11,917,680 shares of its common stock and warrants to purchase 2,383,508 shares of its common stock in a private placement at $1.11 and $1.15 per share. After deducting commissions and other expenses relating to the private placement the Company received net proceeds of $12,250,209. Paramount BioCapital, Inc. ("Paramount"), an affiliate of a significant stockholder of the Company, acted as placement agent and was paid cash commissions and expenses of $967,968 of which $121,625 was paid to certain selected dealers engaged by Paramount in the private placement. The Company also issued warrants to purchase 595,449 shares of common stock to Paramount and certain select dealers, of which Paramount received warrants to purchase 517,184 common shares. Timothy McInerney and Dr. Michael Weiser, each a director of the Company, were employees of Paramount BioCapital, Inc. at the time of the transaction.

During 2005 the Company recorded a dividend on the Convertible Preferred of $175,663. 41,781 shares of Convertible Preferred were issued in payment of this $175,663 in-kind dividend and the unpaid portion of the 2004 in-kind dividend, $303,411. Also during 2005, the remaining 896,154 shares of Convertible preferred were converted into 8,146,858 shares of the Company's common stock.

During 2005, the Company issued 675,675 shares of its common stock at $1.11 per share and warrants to purchase 135,135 shares of its common stock to Cato BioVentures, an affiliate of Cato Research, Inc., in exchange for satisfaction of $750,000 of accounts payable owed by the Company to Cato Research, Inc. Since the value of the shares and warrants issued was approximately $750,000, there is no impact on the statement of operations for this transaction.

During 2005 the Company issued 312,245 shares of common stock upon the exercise of stock options and warrants.

As described in Note 1, in April 2005, the Company completed the Merger with Tarpan. In accordance with the Agreement, the stockholders of Tarpan received 10,731,052 shares of the Company's common stock with a value of $11,052,984.

2006

During 2006 the Company issued 27,341 shares of common stock upon the exercise of warrants.

2007

On March 30, 2007, the Company entered into a series of subscription agreements with various institutional and other accredited investors for the issuance and sale in a private placement of an aggregate of 10,185,502 shares of its common stock for total net proceeds of approximately $7.85 million, after deducting commissions and other costs of the transaction. Of the total amount of shares issued, 10,129,947 were sold at a per share price of $0.84, and an additional 55,555 shares were sold to an entity affiliated with a director of the Company, at a per share price of $0.90, the closing sale price of the common stock on March 29, 2007. Pursuant to the subscription agreements, the Company also issued to the investors 5-year warrants to purchase an aggregate of 3,564,897 shares of common stock at an exercise price of $1.00 per share. The warrants are exercisable during the period commencing September 30, 2007 and ending March 30, 2012. Gross and net proceeds from the private placement were $8,559,155 and $7,852,185, respectively.

Pursuant to these subscription agreements the Company filed a registration statement on Form S-3 covering the resale of the shares issued in the private placement, including the shares issuable upon exercise of the investor warrants and the placement agent warrants, with the Securities and Exchange Commission on May 9, 2007, which was declared effective by the Securities and Exchange Commission on May 18, 2007.

The Company engaged Paramount, an affiliate of a significant stockholder of the Company, as its placement agent in connection with the private placement. In consideration for its services, the Company paid aggregate cash commissions of approximately $600,000 and issued to Paramount a 5-year warrant to purchase an aggregate of 509,275 shares at an exercise price of $1.00 per share.

(6) Stock Options

2003 Stock Option Plan

In December 2003, the Company established the 2003 Stock Option Plan (the "2003 Plan"), which provided for the granting of up to 5,400,000 options to officers, directors, employees and consultants for the purchase of stock. In August 2005, the Company increased the number of shares of common stock reserved for issuance under the 2003 Plan by 2,000,000 shares. At December 31, 2006, 7,400,000 shares were authorized for issuance. In May 2007, the Company increased the number of shares of common stock reserves for issuance under the 2003 Plan by 3,000,000 shares. At December 31, 2007, 10,400,000 shares were authorized for issuance. The options have a maximum term of 10 years and vest over a period determined by the Company's Board of Directors (generally 3 years) and are issued at an exercise price equal to or greater than the fair market value of the shares at the date of grant. The 2003 Plan expires on December 10, 2013 or when all options have been granted, whichever is sooner. Under the 2003 Plan, the Company granted employees options to purchase an aggregate of 870,000 shares of common stock at an exercise price of $0.95, 75,000 shares of common stock at an exercise price of $0.82 and 397,500 shares of common stock at an exercise price of $0.72 during the year ended December 31, 2007. In addition, 27,776 shares of common stock were issued during 2007 under the 2003 Plan.

At December 31, 2007 there were 3,475,626 shares reserved for future grants under the 2003 Plan.

1995 Stock Option Plan

In July 1995, the Company established the 1995 Stock Option Plan (the "1995 Plan"), which provided for the granting of options to purchase up to 130,000 shares of the Company's common stock to officers, directors, employees and consultants. The 1995 Plan was amended several times to increase the number shares reserved for stock option grants. In June 2005 the 1995 Plan expired and no further options can be granted. At December 31, 2007 options to purchase 1,137,240 shares were outstanding and no shares were reserved for future stock option grants under the 1995 Plan.

A summary of the status of the Company's stock options as of December 31, 2007 and changes during the year then ended is presented below:

	2007			
	Shares	**Weighted average exercise price**	**Weighted Average Remaining Contractual Term (years)**	**Aggregate Intrinsic Value**
Outstanding at beginning of year	7,000,504	$ 1.310		
Granted	1,342,500	$ 0.875		
Exercised	-			
Cancelled	(309,166)	$ 0.336		
Outstanding at end of year	8,033,838	$ 1.253	6.887	$
Options exercisable at year-end	5,601,714	$ 1.263	6.625	$
Weighted-average fair value of options granted during the year	$ 0.63			

As of December 31, 2007 and 2006, the total compensation cost related to non-vested option awards not yet recognized is $539,046 and $1,365,581, respectively. The weighted average period over which it is expected to be recognized is approximately 0.5 and 0.9 years, respectively.

The following table summarizes the information about stock options outstanding at December 31, 2007:

Exercise Price	Number of Options Outstanding	Remaining Contractual Life (years)	Number of Options Exercisable
$ 0.40	876,090	5.16	876,090
0.43	400	5.15	400
0.70	220,000	8.53	73,333
0.72	365,000	9.09	32,500
0.82	75,000	9.08	-
0.89	16,667	8.38	16,667
0.95	670,000	9.32	100,000
0.97	440,000	6.75	440,000
1.00	65,000	4.24	65,000
1.00	290,698	7.04	290,698
1.25	12,000	4.08	12,000
1.25	163,750	4.14	163,750
1.35	108,333	8.08	64,999
1.35	300,000	8.09	300,000
1.35	60,000	8.53	20,000
1.50	2,923,900	7.25	1,949,277
1.50	250,000	2.58	25,000
1.60	100,000	7.46	75,000
1.65	1,077,000	6.08	1,077,000
4.38	10,000	3.14	10,000
20.94	10,000	2.28	10,000
Total	8,033,838		5,601,714

(7) Stock Warrants

The following table summarizes the information about warrants to purchase shares of our common stock outstanding at December 31, 2007:

Exercise price	Number of Warrants outstanding	Remaining contractual life (years)	Number of warrants exercisable
$ 0.28	150,000	4.64	150,000
0.78	10,000	1.98	10,000
1.00	3,564,897	4.25	3,564,897
1.00	509,275	4.25	509,275
1.10	909,090	.85	909,090
1.10	326,499	1.04	326,499
1.44	2,161,767	2.65	2,161,767
1.44	540,449	2.65	540,449
1.44	135,135	2.65	135,135
1.49	221,741	2.67	221,741
1.49	55,000	2.67	55,000
1.90	10,000	1.21	10,000

	1.90	90,000	1.21	90,000
	6.69	185,601	.10	185,601
Total		8,869,454		8,869,454

(8) Related-Party Transactions

Oleoylestrone Developments, SL

The Company entered into a consulting agreement with OED. The agreement became effective in February 2002, at a fee of $6,250 per month. The agreement was terminated in November 2007. The fees associated with the consulting agreement are expensed as incurred. OED currently owns approximately 5.7 percent of the Company's outstanding common stock. Additionally, Mr. Pons, chief executive officer of OED, was a member of the Company's board of directors until his resignation in July 2007.

Total milestone payments under the license agreement of $0, $250,000 and $675,000 and consulting fees of $68,750, $75,000 and $431,250 are included in the accompanying consolidated statements of operations for the years ended December 31, 2007, 2006 and for the cumulative period from August 6, 2001 to December 31, 2007.

Paramount BioCapital, Inc.

One member of the Company's board of directors, Timothy McInerney, was an employee of Paramount or one of its affiliates until April 2007. Another member of the Company's board of directors, Michael Weiser, was an employee of Paramount until December 2006. In addition, two former members of the Company's board of directors, Joshua Kazam and David Tanen, were employed by Paramount through August 2004 and were directors of the Company until September 2005. The sole shareholder of Paramount is Lindsay A. Rosenwald, M.D. Dr. Rosenwald beneficially owns more than 5 percent of the Company's common stock as of December 31, 2007 and various trusts established for Dr. Rosenwald's or his family's benefit, held in excess of 12% of the Company's common stock as of December 31, 2007. In November 2003, the Company paid to Paramount approximately $460,000 as commissions earned in consideration for placement agent services rendered in connection with the private placement of the Company's Series A Convertible Preferred Stock, which amount represented 7 percent of the value of the shares sold by Paramount in the offering. In addition, in January 2004, the Company paid approximately $260,000 as commissions earned in consideration for placement agent services rendered by Paramount in connection with a private placement of the Company's common stock, which amount represented 7 percent of the value of the shares sold by Paramount in the private placement. In connection with both private placements and as a result of their employment with Paramount, Mr. Kazam, Mr. McInerney and Dr. Weiser were allocated 5-year placement agent warrants to purchase 60,174, 58,642 and 103,655 shares of the Company's common stock, respectively, at a price of $1.10 per share.

Paramount also served as the Company's placement agent in connection with the August 2005 private placement. As placement agent, the Company paid to Paramount total cash commissions of $839,816 relating to the August 26, 2005 closing, of which $121,625 was paid to certain selected dealers engaged by Paramount in connection with the private placement and issued five-year warrants to purchase an aggregate of 540,449 shares of common stock exercisable at a price of $1.44 per share, of which Paramount received warrants to purchase 462,184 common shares. In connection with the August 30 closing, the Company paid cash commissions to Paramount of $88,550 and issued an additional five-year warrant to purchase 55,000 common shares exercisable at a price of $1.49 per share.

Paramount also served as the Company's placement agent in connection with the March 2007 private placement. As placement agent, the Company paid to Paramount aggregate cash commissions of approximately $600,000 and issued to Paramount a 5-year warrant to purchase an aggregate of 509,275 shares of common stock at an exercise price of $1.00 per share.

(9) Income Taxes

There was no current or deferred tax expense for the years ended December31, 2007 or 2006 because of the Company's operating losses.

The components of deferred tax assets as of December31, 2007 and 2006 are as follows:

	2007	2006
Deferred tax assets:		
Tax loss carryforwards	$ 22,513,000	$ 18,265,000
Research and development credit	1,769,000	1,374,000
In-process research and development charge	4,850,000	4,850,000
Stock based compensation	1,270,000	682,000
Other	85,000	29,000
Gross deferred tax assets	30,487,000	25,200,000
Less valuation allowance	(30,487,000)	(25,200,000)
Net deferred tax assets	$ —	$ —

The reasons for the difference between actual income tax benefit for the years ended December31, 2007 and 2006 and the amount computed by applying the statutory federal income tax rate to losses before income tax benefit are as follows:

	2007		2006	
	Amount	% of pretax loss	Amount	% of pretax loss
Federal income tax benefit at statutory rate	$ (4,102,000)	(34.0%)	$ (3,296,000)	(34.0%)
State income taxes, net of federal tax	(820,000)	(6.8%)	(659,000)	(6.8)%
Research and development credits	(366,000)	(3.0%)	(200,000)	(1.7)%
Other	1,000	0.0%	(166,000)	(2.1)%
Change in valuation allowance	5,287,000	43.8%	4,321,000	44.6%
	—	—%	—	—%

A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. The net change in the total valuation allowance for the years ended December 31, 2007 and 2006 was an increase of $5,287,000 and $4,321,000, respectively. The tax benefit assumed using the federal statutory tax rate of 34% has been reduced to an actual benefit of zero due principally to the aforementioned valuation allowance.

At December 31, 2007, the Company had unused federal and state net operating loss carryforwards of approximately $56,963,000 and $46,261,000, respectively. The net operating loss carryforwards expire in various amounts through 2027 for federal and state income tax purposes. The Tax Reform Act of 1986 contains provisions which limit the ability to utilize net operating loss carryforwards in the case of certain events including significant changes in ownership interests. Accordingly, a substantial portion of the Company's net operating loss carryforwards above will be subject to annual limitations (currently approximately $100,000) in reducing any future year's taxable income. At December 31, 2007, the Company also had research and development credit carryforwards of approximately $1,769,000 for federal income tax purposes which expire in various amounts through 2027.

The Company files income tax returns in the U.S. Federal, State and Local jurisdictions. With certain exceptions, the Company is no longer subject to U.S. federal and state income tax examinations by tax authorities for years prior to 2004. The Company adopted the provisions of FIN 48, "Accounting for Uncertainty in Income Taxes - an interpretation of FASB Statement No. 109" on January 1, 2007 with no material impact to the consolidated financial statements. The Company had no unrecognized tax benefits during 2007 that would affect the annual effective tax rate and no unrecognized tax benefits as of January 1, 2007 and December 31, 2007. Further, the Company is unaware of any positions for which it is reasonably possible that the total amounts of unrecognized tax benefits will significantly increase or decrease within the next twelve months.

(10) License and Consulting Agreements

IGI Agreement for PTH (1-34)

On April 1, 2005, as part of the acquisition of Tarpan Therapeutics, Inc., the Company acquired a Sublicense Agreement with IGI, Inc. (the "IGI Agreement") dated April 14, 2004. Under the IGI Agreement the Company received the exclusive, world-wide, royalty bearing sublicense to develop and commercialize the licensed technology (see Note 1). Under the terms of the IGI Agreement, the Company is responsible for the cost of the preclinical and clinical development of the project, including research and development, manufacturing, laboratory and clinical testing and trials and marketing of licensed products for which the company will be responsible.

In consideration for the Company's rights under the IGI Agreement, a payment of $300,000 was made upon execution of the agreement, prior to the Company's acquisition of Tarpan. In addition the IGI Agreement requires the Company to make certain milestone payments as follows: $300,000 payable upon the commencement of a Phase 2 clinical trial; $500,000 upon the commencement of a Phase 3 clinical trial; $1,500,000 upon the acceptance of an NDA application by the FDA; $2,400,000 upon the approval of an NDA by the FDA; $500,000 upon the commencement of a Phase 3 clinical trial for an indication other than psoriasis; $1,500,000 upon the acceptance of and NDA application for an indication other than psoriasis by the FDA; and $2,400,000 upon the approval of an NDA for an indication other than psoriasis by the FDA.

During 2007, we achieved the milestone of the commencement of Phase 2 clinical trial. As a result $300,000 became payable to IGI. This $300,000 is included in research and development expense for the year ended December 31, 2007. Payment was made to IGI in February 2008. At December 31, 2007 this $300,000 liability is reflected in accounts payable.

In addition, the Company is obligated to pay IGI, Inc. an annual royalty of 6% annual net sales on annual net sales up to $200,000,000. In any calendar year in which net sales exceed $200,000,000, the Company is obligated to pay IGI, Inc. an annual royalty of 9% annual net sales. Through December 31, 2007, the Company has not paid any such royalties.

IGI, Inc. may terminate the agreement (i) upon 60 days' notice if the Company fails to make any required milestone or royalty payments, or (ii) if the Company becomes bankrupt or if a petition in bankruptcy is filed, or if the Company is placed in the hands of a receiver or trustee for the benefit of creditors. IGI, Inc. may terminate the agreement upon 60 days' written notice and an opportunity to cure in the event the Company commits a material breach or default. Eighteen months from the date of the IGI Agreement, the Company may terminate the agreement in whole or as to any portion of the PTH patent rights upon 90 days' notice to IGI, Inc.

Hedrin License Agreement

On June 26, 2007, the Company entered into an exclusive license agreement for "Hedrin" (the "Hedrin License Agreement") with Thornton & Ross Ltd. ("T&R") and Kerris, S.A. ("Kerris"). Pursuant to the Hedrin License Agreement, the Company has acquired an exclusive North American license to certain patent rights and other intellectual property relating to Hedrin(TM), a non-insecticide product candidate for the treatment of head lice. In addition, on June 26, 2007, the Company entered into a supply agreement with T&R pursuant to which T&R will be the Company's exclusive supplier of Hedrin product the "Hedrin Supply Agreement".

In consideration for the license, the Company issued to T&R and Kerris (jointly, the "Licensor") a combined total of 150,000 shares of its common stock valued at $120,000. In addition, the Company also made a cash payment of $600,000 to the Licensor. These amounts are included in research and development expense. Further, the Company agreed to make future milestone payments to the Licensor in the aggregate amount of $2,500,000 upon the achievement of various clinical, regulatory, and patent issuance milestones, as well as up to $2,500,000 in a one-time success fee based on aggregate sales of the product by the Company and its licensees of at least $50,000,000. The Company also agreed to pay royalties of 8% (or, under certain circumstances, 4%) on net sales of licensed products. The Company's exclusivity under the Hedrin License Agreement is subject to an annual minimum royalty payment of $1,000,000 (or, under certain circumstances, $500,000) in each of the third through seventh years following the first commercial sale of Hedrin. The Company may sublicense its rights under the Hedrin Agreement with the consent of Licensor and the proceeds resulting from such sublicenses will be shared with the Licensor.

Pursuant to the supply agreement, the Company has agreed that it and its sublicensees will purchase their respective requirements of the Hedrin product from T&R at agreed upon prices. Under certain circumstances where T&R is unable to supply Hedrin products in accordance with the terms and conditions of the Supply Agreement, the Company may obtain products from an alternative supplier subject to certain conditions. The term of the Supply Agreement ends upon termination of the Hedrin Agreement.

In February 2008 the Company assigned and transferred its rights in Hedrin to joint venture, see note 12- Subsequent Events, Joint Venture with Nordic.

Altoderm License Agreement

On April 3, 2007, the Company entered into a license agreement for “Altoderm” (the “Altoderm Agreement”) with T&R. Pursuant to the Altoderm Agreement, the Company acquired an exclusive North American license to certain patent rights and other intellectual property relating to Altoderm, a topical skin lotion product candidate using sodium cromoglicate for the treatment of atopic dermatitis. In accordance with the terms of the Altoderm Agreement, the Company issued 125,000 shares of its common stock, valued at $112,500, and made a cash payment of $475,000 to T&R upon the execution of the agreement. These amounts have been included in research and development expense. Further, the Company agreed to make future milestone payments to T&R comprised of various combinations of cash and common stock in respective aggregate amounts of $5,675,000 and 875,000 shares of common stock upon the achievement of various clinical and regulatory milestones. The Company also agreed to pay royalties on net sales of products using the licensed patent rights at rates ranging from 10% to 20%, depending on the level of annual net sales, and subject to an annual minimum royalty payment of $1 million in each year following the first commercial sale of Altoderm. The Company may sublicense the patent rights. The Company agreed to pay T&R 30% of the royalties received by the Company under such sublicense agreements.

Altolyn License Agreement

On April 3, 2007, the Company and T&R also entered into a license agreement for “Altolyn” (the “Altolyn Agreement”). Pursuant to the Altolyn Agreement, the Company acquired an exclusive North American license to certain patent rights and other intellectual property relating to Altolyn, an oral formulation product candidate using sodium cromoglicate for the treatment of mastocytosis, food allergies, and inflammatory bowel disorder. In accordance with the terms of the Altolyn Agreement, the Company made a cash payment of $475,000 to T&R upon the execution of the agreement. This amount is included in research and development expense. Further, the Company agreed to make future cash milestone payments to T&R in an aggregate amount of $5,675,000 upon the achievement of various clinical and regulatory milestones. The Company also agreed to pay royalties on net sales of products using the licensed patent rights at rates ranging from 10% to 20%, depending on the level of annual net sales, and subject to an annual minimum royalty payment of $1 million in each year following the first commercial sale of Altolyn. The Company may sublicense the patent rights. The Company agreed to pay T&R 30% of the royalties received by the Company under such sublicense agreements.

OED License Agreement for Oleoyl-estrone

On February 15, 2002, the Company entered into a License Agreement (the "License Agreement") with OED. Under the terms of the License Agreement, OED granted to the Company a world-wide license to make, use, lease and sell the products incorporating the licensed technology (see Note 1). OED also granted to the Company the right to sublicense to third parties the licensed technology or aspects of the licensed technology with the prior written consent of OED. OED retains an irrevocable, nonexclusive, royalty-free right to use the licensed technology solely for its internal, noncommercial use. The License Agreement shall terminate automatically upon the date of the last to expire patent contained in the licensed technology or upon the Company's bankruptcy. OED may terminate the License Agreement in the event of a material breach by the Company that is not cured within the notice period. The Company may terminate the License Agreement for any reason upon 60 days notice. The Company terminated this agreement in November 2007.

In addition to the License Agreement, the Company entered into a consulting agreement with OED. The agreement became effective in February 2002, at a fee of $6,250 per month, and terminated when the License Agreement terminated. The fees associated with the consulting agreement are expensed as incurred.

Under the License Agreement, the Company agreed to pay to OED certain licensing fees which are being expensed as they are incurred. The Company paid $175,000 in up front licensing fees which is included in 2002 research and development expense. In addition, pursuant to the License Agreement, the Company issued 1,000,000 shares of its common stock to OED. The Company valued these shares at their then estimated fair value of $1,000.

In connection with the License Agreement, the Company has agreed to milestone payments to OED as follows:

(i) $250,000 upon the treatment of the first patient in a Phase I clinical trial under a Company-sponsored investigational new drug application ("IND"), which was paid in 2005; (ii) $250,000 upon the treatment of the first patient in a Phase II clinical trial under a Company-sponsored IND, which was paid in 2006; (iii) $750,000 upon the first successful completion of a Company-sponsored Phase II clinical trial under a Company-sponsored IND; (iv) $2,000,000 upon the first successful completion of a Company-sponsored Phase III clinical trial under a Company sponsored IND; and (v) $6,000,000 upon the first final approval of the first new drug application for the first licensed product by the United States Food and Drug Administration (“FDA”). Through December 31, 2007, the Company paid a total of $675,000 in licensing fees and milestone payments. The Company has no further financial liability or commitment to OED under the License Agreement.

NovaDel Agreement for Propofol Lingual Spray

In April 2003, the Company entered into a license and development agreement with NovaDel, under which the Company received certain worldwide, exclusive rights to develop and commercialize products related to NovaDel’s proprietary lingual spray technology for delivering propofol for pre-procedural sedation. Under the terms of this agreement, the Company agreed to use its commercially reasonable efforts to develop and commercialize the licensed products, to obtain necessary regulatory approvals and to thereafter exploit the licensed products. The agreement also provides that NovaDel will undertake to perform, at the Company’s expense, a substantial portion of the development activities, including, without limitation, preparation and filing of various applications with applicable regulatory authorities.

In consideration for the Company’s rights under the NovaDel license agreement, the Company paid NovaDel an initial license fee of $500,000 in 2003. In addition, the license agreement requires the Company to make certain milestone payments as follows: $1,000,000 payable following the date that the first NDA for lingual spray propofol is accepted for review by the FDA; $1,000,000 following the date that the first European Marketing Application is accepted for review by any European Union country; $2,000,000 following the date when the first filed NDA for lingual spray propofol is approved by the FDA; $2,000,000 following the date when the first filed European Marketing Application for lingual spray propofol is accepted for review; $1,000,000 following the date on which an application for commercial approval of lingual spray propofol is approved by the appropriate regulatory authority in each of Australia, Canada, Japan and South Africa; and $50,000 following the date on which an application for commercial approval for lingual spray propofol is approved in any other country (other than the U.S., a member of the European Union, Australia, Canada, Japan or South Africa).

In addition, the Company is obligated to pay to NovaDel an annual royalty based on a fixed rate of net sales of licensed products, or if greater, the annual royalty is based on the Company's net profits from the sale of licensed products at a rate that is twice the net sales rate. In the event the Company sublicenses the licensed product to a third party, the Company is obligated to pay royalties based on a fixed rate of fees or royalties received from the sublicensee until such time as the Company recovers its out-of-pocket costs, and thereafter the royalty rate doubles. Because of the continuing development efforts required of NovaDel under the agreement, the royalty rates are substantially higher than customary for the industry. Through December 31, 2007, the Company has incurred, and paid a total of $500,000 under the NovaDel license agreement, the initial license fee paid in 2003. The Company terminated this agreement during 2007 and has no continuing obligations under this agreement.

(11) Commitments and Contingencies

Swiss Pharma

Swiss Pharma Contract LTD ("Swiss Pharma"), a clinical site that the Company used in one of its obesity trials, gave notice to the Company that Swiss Pharma believes it is entitled to receive an additional payment of $322,776 for services in connection with that clinical trial. While the contract between the Company and Swiss Pharma provides for additional payments if certain conditions are met, Swiss Parma has not specified which conditions they believe have been achieved and the Company does not believe that Swiss Pharma is entitled to additional payments and has not accrued any of these costs as of December 31, 2007. The contract between the Company and Swiss Pharma provides for arbitration in the event of a dispute, such as this claim for an additional payment. Swiss Pharma has filed a demand for arbitration. As the Company does not believe that Swiss Pharma is entitled to additional payments, it intends to defend its position in arbitration. The arbitration is currently in its initial stages.

Therapeutics, Inc.

During 2007, we entered into an agreement with Therapeutics, Inc. for the conduct of a Phase 2a clinical trial of PTH (1-34). The amount of the agreement is approximately $845,000. At December 31, 2007, we recognized research and development expense of $483,000 related to the conduct of this clinical trial. At December 31, 2007, we recognized prepaid expense of $19,000 related to this clinical trial. The remaining financial commitment related to the conduct of the clinical trial is approximately $340,000. This clinical trial is expected to conclude in the second quarter of 2008.

Contentions of a Former Employee

In February 2007, a former employee of the Company alleged an ownership interest in two of the Company's provisional patent applications. Also, without articulating precise legal claims, the former employee contends that the Company wrongfully characterized the former employee's separation from employment as a resignation instead of a dismissal in an effort to harm the former employee's immigration sponsorship efforts, and, further, to wrongfully deprive the former employee of the former employee's alleged rights in two of the Company's provisional patent applications. The former employee is seeking an unspecified amount in damages. The Company refutes the former employee's contentions and intends to vigorously defend itself should the former employee file claims against the Company. There have been no further developments with respect to these contentions.

Employment Agreement

The Company has employment agreements with two employees for the payment of aggregate annual base salary of $530,000 as well as performance based bonuses. These agreements have three year terms and have a remaining obligation of $394,000 as of December 31, 2007.

Leases

The Company leases office space under a non-cancellable lease terminating in September 2008. Rent expense was $141,012 for each of the years ended December 31, 2007 and 2006.

Future minimum rental payments subsequent to December 31, 2007 under an operating lease for the Company's office facility are as follows:

Years Ending December 31,	Commitment
2008	$ 100,000
2009 and subsequent	$ 0

12. Subsequent events

Joint Venture with Nordic

In February 2008, the Company and Nordic Biotech Advisors ApS through its investment fund Nordic Biotech Venture Fund II K/S ("Nordic") entered into a 50/50 joint venture agreement (the "Hedrin JV") to develop and commercialize the Company's North American rights (under license) to its Hedrin product.

Pursuant to the Hedrin JV Agreement, Nordic formed a new Danish limited partnership (the "Hedrin JV") and provided it with initial funding of $2.5 million. The Company assigned and transfered its North American rights in Hedrin to the Hedrin JV in return for a $2.0 million cash payment and equity in the Hedrin JV representing 50% of the nominal equity interests in the Hedrin JV .

Should the Hedrin JV be successful in achieving a payment milestone, namely that by September 30, 2008, the FDA determines to treat Hedrin as a medical device, Nordic will purchase an additional $2.5 million of equity in the Hedrin JV, whereupon the Hedrin JV will pay the Company an additional $1.5 million in cash and issue to the Company an additional $2.5 million in equity in the Hedrin JV, thereby maintaining the Company's 50% ownership interest in the Hedrin JV.

The Hedrin JV will be responsible for the development and commercialization of Hedrin for the North American market and all associated costs including clinical trials, if required, regulatory costs, patent costs, and future milestone payments owed to T&R, the licensor of Hedrin.

The Hedrin JV will engage the Company to provide management services to the Limited Partnership in exchange for an annualized management fee, which for 2008, on an annualized basis, is $527,000.

Nordic paid to the Company a non-refundable fee of $150,000 at the closing for the right to receive a warrant covering 7.1 million shares of the Company's common stock, exercisable for $0.14 per share. The warrant is issuable 90 days from closing, provided Nordic has not exercised all or a part of its put, as described below. The per share exercise price of the warrant was based on the volume weighted average price of the Company's common stock for the period prior to the signing of the Hedrin JV Agreement.

Nordic has an option to put all or a portion of its equity interest in the Hedrin JV to the Company in exchange for the Company's common stock. The shares of the Company's common stock to be issued upon exercise of the put will be calculated by multiplying the percentage of Nordic's equity in the Hedrin JV p that Nordic decides to put to the Company multiplied by the dollar amount of Nordic's investment in Limited Partnership divided by $0.14, as adjusted from time to time. The put option is exercisable immediately and expires at the earlier of ten years or when Nordic's distributions from the Limited Hedrin JV exceed five times the amount Nordic invested in the Hedrin JV.

The Company has an option to call all or a portion of Nordic's equity interest in the Hedrin JV in exchange for the Company's common stock. The Company cannot begin to exercise its call until the price of the Company's common stock has closed at or above $1.40 per share for 30 consecutive trading days. During the first 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 25% of its call option. During the second 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 50% of its call option on a cumulative basis. During the third 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 75% of its call option on a cumulative basis. During the fourth 30 consecutive trading day period in which the Company's common stock closes at or above $1.40 per share the Company can exercise up to 100% of its call option on a cumulative basis. The shares of the Company's common stock to be issued upon exercise of the call will be calculated by multiplying the percentage of Nordic's equity in the Limited Partnership that the Company calls, as described above, multiplied by the dollar amount of Nordic's investment in the Hedrin JV divided by $0.14. Nordic can refuse the Company's call by either paying the Company up to $1.5 million or forfeiting all or a portion of their put, calculated on a pro rata basis for the percentage of the Nordic equity interest called by the Company.

The Hedrin JV 's Board will consist of 4 members, 2 appointed by the Company and 2 appointed by Nordic. Nordic has the right to appoint one of the directors as chairman of the Board. The chairman has certain tie breaking powers. In the event that the payment milestone described above is not achieved by June 30, 2008, then the Hedrin JV 's Board will increase to 5 members, 2 appointed by the Company and 3 appointed by Nordic.

After the closing, at Nordic's request, the Company will nominate a person identified by Nordic to serve on the Company's Board of Directors.

The Company will grant Nordic registration rights for the shares to be issued upon exercise of the warrant, the put or the call. The Company is required to file an initial registration statement within 10 calendar days of filing its Form 10-K for the year ended December 31, 2007. The Company is required to file additional registration statements, if required, within 45 days of the date the Company first knows that such additional registration statement was required. The Company is required to use commercially reasonable efforts to cause the registration statement to be declared effective by the Securities and Exchange Commission ("SEC") within 105 calendar days from the filing date. If the Company fails to file a registration statement on time or if a registration statement is not declared effective by the SEC within 105 days of filing the Company will be required to pay to Nordic, or its assigns, an amount in cash, as partial liquidated damages, equal to 0.5% per month of the amount invested in the Hedrin JV by Nordic until the registration statement is declared effective by the SEC. In no event shall the aggregate amount payable by the Company exceed 9% of the amount invested in the Hedrin JV by Nordic.

The profits of the Hedrin JV will be shared by the Company and Nordic in accordance with their respective equity interests in Limited Partnership, which are currently 50% to each, except that Nordic will get a minimum guaranteed return from the Hedrin JV equal to 5% on Hedrin sales, as adjusted for any change in Nordic's equity interest in the Limited Partnership. If the Hedrin JV realizes a profit equal to or greater than a 10% royalty on Hedrin sales, then profits will be shared by the Company and Nordic in accordance with their respective equity interests in the Limited Partnership. However, in the event of a liquidation of the Limited Partnership, Nordic's distribution in liquidation will be at least equal to the amount Nordic invested in the Hedrin JV ($5 million if the payment milestone described above is met, $2.5 million if it is not met) plus 10% per year, less the cumulative distributions received by Nordic from the Hedrin JV. Further, in no event shall Nordic's distribution in liquidation be greater than assets available for distribution in liquidation.

American Stock Exchange

In September 2007, we received notice from the staff of AMEX, indicating that we were not in compliance with certain continued listing standards set forth in the American Stock Exchange Company guide. Specifically, the American Stock Exchange notice cited our failure to comply, as of June 30, 2007, with section 1003(a)(ii) of the AMEX Company Guide as we had less than $4,000,000 of stockholders' equity and had losses from continuing operations and /or net losses in three or four of our most recent fiscal years and with section 1003(a)(iii) which requires us to maintain $6,000,000 of stockholders' equity if we have experienced losses from continuing operations and /or net losses in its five most recent fiscal years.

In order to maintain our AMEX listing, we were required to submit a plan to AMEX advising the exchange of the actions we have taken, or will take, that would bring us into compliance with all the continued listing standards by April 16, 2008. We submitted such a plan in October 2007. If we are not in compliance with the continued listing standards at the end of the plan period, or if we do not make progress consistent with the plan during the period, AMEX staff may initiate delisting proceedings.

Under the terms of the Joint Venture Agreement, the number of potentially issuable shares represented by the put and call features of the Hedrin agreement, and the warrant issuable to Nordic, would exceed 19.9% of our total outstanding shares and would be issued at a price below the greater of book or market value. As a result, under AMEX regulations, we would not be able to complete the transaction without first receiving either stockholder approval for the transaction, or a formal "financial viability" exception from AMEX's stockholder approval requirement. We estimate that obtaining stockholder approval to comply with AMEX regulations would take a minimum of 45 days to complete. We have discussed the financial viability exception with AMEX for several weeks and have neither received the exception nor been denied the exception. We determined that our financial condition required us to complete the transaction immediately, and that the Company's financial viability depends on its completion of the transaction without further delay.

Accordingly, to maintain the Company's financial viability, on February 28, 2008 we announced that we had formally notified the AMEX that we intend to voluntarily delist our common stock from AMEX. The delisting became effective on March 26, 2008.

Our common stock now trades on the Over the Counter Bulletin Board ("OCTBB") under the symbol "MHAN". We intend to maintain corporate governance, disclosure and reporting procedures consistent with applicable law.

Index to Exhibits Filed with this Report

Exhibit No.	Description
10.11	Separation Agreement between the Registrant and Alan G. Harris dated December 21, 2007.
10.19	Joint Venture Agreement between Nordic Biotech fund II K/S and Manhattan Pharmaceuticals, Inc. to develop and commercialize “Hedrin” dated January 31, 2008.
10.20	Amendment No. 1, dated February 25, 2008, to the Joint Venture Agreement between Nordic Biotech fund II K/S and Manhattan Pharmaceuticals, Inc. to develop and commercialize “Hedrin” dated January 31, 2008.
10.21	Assignment and Contribution Agreement between Hedrin Pharmaceuticals K/S and Manhattan Pharmaceuticals, Inc. dated February 25, 2008.
10.22	Registration Rights Agreement between Nordic Biotech Venture Fund II K/S and Manhattan Pharmaceuticals, Inc. dated February 25, 2008.
10.23	Amendment to Employment Agreement by and between Manhattan Pharmaceuticals, Inc. and Douglas Abel
23.1	Consent of J.H. Cohn LLP.
31.1	Certification of Principal Executive Officer.
31.2	Certification of Principal Financial Officer.
32.1	Certifications pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

SEPARATION AND RELEASE AGREEMENT

THIS SEPARATION AND RELEASE AGREEMENT (this " Agreement ") is entered into by and among ALAN G. HARRIS, M.D., Ph.D. (" Harris "), with an address at 190 East 72 nd Street, Apt. 26B, New York, NY 10021 and MANHATTAN PHARMACEUTICALS, INC. (the " Employer "), with its principal executive offices located at 810 Seventh Avenue, 4 th floor, New York, New York 10019, and together with its parents, divisions, affiliates, and subsidiaries and their respective officers, directors, employees, shareholders, members, partners, plan administrators, attorneys, and agents, as well as any predecessors, future successors or assigns or estates of any of the foregoing (collectively referred to herein as the " Company ").

1. Separation of Employment . Harris acknowledges and agrees that Harris' last day employment with Employer shall be December 31, 2007 (the " Separation Date "), and that Harris has received all compensation and benefits to which Harris is entitled as a result of Harris' employment with Employer, except as otherwise provided in this Agreement. Harris understands that, except as otherwise provided in this Agreement, Harris is entitled to nothing further from Company, including reinstatement by Employer.

2. Harris Release of Company . In consideration of the release set forth in Section 4 and the payments, compensation, and other benefits set forth below in Section 5, Harris hereby releases, waives, discharges and gives up any and all Claims (as defined below) that Harris may have against Company, arising on or prior to Harris' execution and delivery of this Agreement to Employer. " Claims " means any and all actions, charges, controversies, demands, causes of action, suits, rights, and/or claims whatsoever for debts, sums of money, wages, salary, severance pay, commissions, bonuses, incentive compensation, unvested stock options, restricted stock awards, vacation pay, sick pay, expense reimbursement, fees and costs, attorneys fees, losses, penalties, damages, including damages for pain and suffering and emotional harm, arising, directly or indirectly, out of any promise, agreement (including, without limitation, his Employment Agreement dated January 26, 2006, hereafter the " Employment Agreement "), contract, understanding, common law, tort, the laws, statutes, and/or regulations of the States of New York, Delaware, or any other state and the United States, including, but not limited to, federal and state wage and hour laws, federal and state whistleblower laws, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Equal Pay Act, the Americans with Disabilities Act, the Family and Medical Leave Act, the Employment Retirement Income Security Act (excluding COBRA), the Vietnam Era Veterans Readjustment Assistance Act, the Fair Credit Reporting Act, the Fair Labor Standards Act, the Age Discrimination in Employment Act, OSHA, the Sarbanes-Oxley Act of 2002, the Delaware Discrimination in Employment Act, the Delaware Handicapped Persons Employment Protection Act, the New York State Human Rights Laws, and the New York City Human Rights Laws, as each may be amended from time to time, whether arising directly or indirectly from any act or omission, whether intentional or unintentional. This releases all Claims including those of which Harris is not aware and those not mentioned in this Agreement. Harris specifically releases any and all Claims arising out of his employment with Employer, and/or the separation thereof or therefrom. Harris expressly forfeits and waives his right to any stock options that have not vested as of the Separation Date, except as otherwise provided in this Agreement on the attached *Schedule A* . Nothing in this Agreement shall preclude Harris from: (A) participating in any manner in an investigation, hearing or proceeding conducted by the Equal Employment Opportunity Commission, but Harris hereby waives any and all rights to recover under, or by virtue of, any such investigation, hearing or proceeding; (B) exercising Harris' rights, if any, under Section 601-608 of the Employee Retirement Income Security Act of 1974, as amended, popularly known as COBRA; or (C) exercising Harris' rights under this Agreement.

3. Representations; Covenants. Harris hereby represents and warrants to Company that: (A) Harris has not filed, caused or permitted to be filed any pending proceeding (nor has Harris lodged a complaint with any governmental or quasi-governmental authority) against Company, nor has Harris agreed to do any of the foregoing; (B) Harris has not assigned, transferred, sold, encumbered, pledged, hypothecated, mortgaged, distributed, or otherwise disposed of or conveyed to any third party any right or Claim against Company that has been released in this Agreement; (C) Harris has not directly or indirectly assisted any third party in filing, causing or assisting to be filed, any Claim against Company, and (D) Harris is unaware of any potential Claims that any third party may have against Company which Harris has not previously disclosed to Company. In addition, Harris shall not encourage or solicit or voluntarily assist or participate in any way in the filing, reporting or prosecution by itself or any third party of a proceeding or Claim against Company based upon or relating to any Claim released by Harris in this Agreement.

4. Employer Release of Harris; Indemnification .

(a) As good consideration to Harris, Employer hereby forever releases, waives and discharges Harris from any and all actions, claims or demands in general, special or punitive damages, attorneys' fees and costs, expenses or other compensation which in any way relate to or arise out of Harris' employment with Employer or separation therefrom or the circumstances related thereto or by reason of any other matter, cause or thing whatsoever from the date of Harris's employment through the date of this Agreement which Employer may now have under federal, state or local law, regulation, or ordinance. Notwithstanding the foregoing, nothing herein shall be deemed to release Harris from any of Harris's acts or omissions involving or arising from fraud or criminal conduct by Harris while employed by Employer, provided that, as of the date of this Agreement, Employer's Chief Executive Officer or Chief Financial Officer is not aware of such conduct. As of the Separation Date, Employer represents that it is unaware of any non-compliance by Harris with respect to his Employment Agreement or this Agreement.

(b) Employer acknowledges and agrees that Harris shall be entitled to the maximum coverage permissible under its directors & officers insurance and any other insurance policy available to Employer or which may be applicable to Harris. To the extent permitted by applicable law and its certificate of incorporation and by-laws, Employer also agrees to indemnify and hold Harris harmless for all actions or omissions he engaged in the course of his employment with Employer to the extent such actions or omissions were in good faith and not outside the scope of his employment or duty to Employer.

5. Consideration . As additional consideration to Harris for his execution, delivery and non-revocation of this Agreement:

(A) Employer shall provide Harris with continuation of his base salary through February 29, 2008, in accordance with Employer's regular payroll practices, commencing on the eighth day after the next regularly scheduled paydate following Harris' execution and delivery of this Agreement to Employer;

(B) Employer shall accelerate Harris' vesting of certain stock options and extend the exercise period for such options to be exercised under Employer's 2003 Stock Option Plan, as set forth on the attached *Schedule A*; and

(C) employer shall waive its right to enforce the covenant against competition provision contained in Section 6(a) of the Employment Agreement.

Harris acknowledges, understands, and agrees that Harris is not otherwise entitled to receive the payments and benefits set forth above in this Section 5, and further acknowledges, understands, and agrees that nothing in this Agreement shall be deemed to be an admission of liability on the part of Company. Harris agrees that Harris will not seek any further payments, benefits, or other consideration or relief from Company.

6. Expense Reimbursement. Harris shall be entitled to reimbursement by Employer of reasonable expenses incurred during his employment with Employer provided such expenses are submitted within a reasonable amount of time following the Separation Date and consistent with Employer's customary policies and practices with respect to such expense reimbursement.

7. Cooperation. Harris agrees to reasonably make himself available through February 29, 2008 to respond to inquiries from the Company regarding any outstanding transitional issues. Harris further agrees, upon Company's request, to reasonably cooperate at any time in any Company investigations, inquiries, and/or litigation regarding events that occurred during Harris' tenure with Employer. Employer will compensate Harris for reasonable expenses that Harris incurs in extending such cooperation to Company, so long as Harris provides advance written notice of Harris' request for compensation.

8. Non-Disparagement; Confidentiality. Harris agrees not to make any defamatory or derogatory statements concerning Company or its products. Employer agrees to instruct its current officers and directors not to make any defamatory or derogatory statements concerning Harris. Harris confirms and agrees that Harris shall not, directly or indirectly, disclose to any person or entity or use for Harris' own benefit, any confidential information concerning the business, finances or operations of Company or its clients or customers, provided, however, that Harris' obligations under this Section 8 shall not apply to information generally known in Company's industry through no fault of Harris or the disclosure of which is required by law. Confidential information shall include trade secrets, customer lists, details of contracts, pricing policies, operational materials, marketing plans or strategies, security and safety plans and strategies, product development, and any other non-public or confidential information of, or relating to, Company. Harris also agrees that the amounts paid to Harris and all of the other terms of this Agreement shall be kept confidential. If Harris breaches any term or condition of this Agreement, it shall constitute a material breach of this Agreement and Company reserves all rights to it available at law or in equity.

9. Surrender of Company Property. Harris agrees that he will surrender to Employer, no later than the Separation Date, all property belonging to, or purchased with the funds of, Company, and any equipment (including computers and cell phones), employee or security identification or access codes, pass codes, keys, credit cards, swipe cards, client data bases, computer files, Company proposals, computer access codes, documents, memoranda, records, files, letters, specification or other papers (including all copies and other tangible forms of the foregoing) acquired by Harris by reason of his employment with Employer and in Harris' possession or under his custody or control relating to the operations, business or affairs of Company. Harris agrees that Harris will not retain any copies, duplicates, reproductions, computer disks, or excerpts thereof of Company documents.

10. Who is Bound . Employer and Harris are bound by this Agreement. Anyone who succeeds to Harris' rights and responsibilities, such as the executors and heirs of Harris' estate, is bound and anyone who succeeds to Employer ' rights and responsibilities, such as their respective successors and assigns, is also bound.

11. Construction of Agreement . In the event that one or more of the provisions contained in this Agreement shall for any reason be held unenforceable in any respect under the law of any state of the United States, such unenforceability shall not affect any other provision of this hereof or thereof, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law. This Agreement and any and all matters arising directly or indirectly herefrom shall be governed under the laws of the State of New York, without reference to choice of law rules. **HARRIS AND EMPLOYER EXPRESSLY WAIVE THEIR RESPECTIVE RIGHTS TO A TRIAL BY JURY WITH RESPECT TO ANY MATTERS RELATED TO THIS AGREEMENT, HARRIS' EMPLOYMENT WITH EMPLOYER GENERALLY, OR ANY OTHER DISPUTE THAT MAY ARISE BETWEEN THEM.**

12. Entire Agreement; Survival . Harris and Employer acknowledge and agree that with the exception of sections 5, 6(b)-(g), 7, 10(a), and 10(c)-(l) of the Employment Agreement (which are attached hereto as *Schedule B* , and which continue to remain in full force and effect and survive Harris' separation of employment with Employer even after the Separation Date), the Employment Agreement shall be null and void. Except as otherwise provided in sections 5, 6(b)-(g), 7, 10(a), and 10(c)-(l) of the Employment Agreement, this Agreement shall constitute the entire agreement among the parties with respect to the matters covered hereby and shall supersede all previous written, oral or implied understandings among them with respect to such matters related to Harris' employment with Employer.

13. Opportunity For Review .

(A) Harris acknowledges that Harris has read and fully understands this Agreement and represents that prior to signing this Agreement Harris has been advised to, and has had an opportunity to, consult Harris' counsel with respect to this Agreement and Harris gives it freely and voluntarily. Harris understands that Harris has been given twenty-one (21) days to review this Agreement before signing it and that if Harris fails to execute this Agreement and return it to Employer within twenty-one days of the date provided to him, Employer shall have no obligation to enter into this Agreement. The parties understand that they are each responsible for their own attorney's fees.

(B) This Agreement shall be effective and enforceable on the eighth (8 th) day after execution and delivery to Employer by Harris. The parties understand and agree that Harris may revoke this Agreement after having executed and delivered it to Employer by so advising Employer in writing no later than 11:59 p.m. on the seventh (7 th) day after Harris' execution and delivery of this Agreement to Employer. If Harris revokes this Agreement, it shall not be effective or enforceable, and Harris shall not receive the payments or the other benefits of this Agreement.

Agreed to and accepted by, on this 21 st day of December, 2007

HARRIS:

s/Alan Harris
Alan Harris

Agreed to and accepted by, on this 21 st day of December, 2007

EMPLOYER:

MANHATTAN PHARMACEUTICALS, INC.

BY: s/Michael McGuinness
Name: Michael McGuinness
Title: Chief Financial Officer

SCHEDULE A

As partial consideration for Harris' execution, delivery, and non-revocation of the Agreement, and as set forth in Paragraph 5(b) of the Agreement, Employer agrees to (i) accelerate the vesting on two issuances of stock options pursuant to Employer's 2003 Stock Option Plan pursuant to the schedule below; and (ii) extend the exercise period on options that already have vested from ninety (90) days to two (2) years, with such exercise period to commence on December 31, 2007.

ISSUE DATE	SHARES	EXERCISE PRICE	VESTING DATE	COMMENT
2/01/06	100,000	$1.35	2/01/07	vested
2/01/06	100,000	$1.35	2/01/08	accelerated
2/01/06	100,000	$1.35	2/01/09	accelerated
4/25/07	100,000	$0.95	4/25/08	accelerated
4/25/07	100,000	$0.95	4/25/09	forfeited
4/25/07	100,000	$0.95	4/25/10	forfeited

SCHEDULE B

5. Confidential Information and Inventions .

(a) The Employee recognizes and acknowledges that in the course of his duties he is likely to receive confidential or proprietary information owned by the Company, its affiliates or third parties with whom the Company or any such affiliates has an obligation of confidentiality. Accordingly, during and after the Term, the Employee agrees to keep confidential and not disclose or make accessible to any other person or use for any other purpose other than in connection with the fulfillment of his duties under this Agreement, any Confidential and Proprietary Information (as defined below) owned by, or received by or on behalf of, the Company or any of its affiliates. "Confidential and Proprietary Information" shall include, but shall not be limited to, confidential or proprietary scientific or technical information, data, formulas and related concepts, business plans (both current and under development), client lists, promotion and marketing programs, trade secrets, or any other confidential or proprietary business information relating to development programs, costs, revenues, marketing, investments, sales activities, promotions, credit and financial data, manufacturing processes, financing methods, plans or the business and affairs of the Company or of any affiliate or client of the Company. The Employee expressly acknowledges the trade secret status of the Confidential and Proprietary Information and that the Confidential and Proprietary Information constitutes a protectable business interest of the Company. The Employee agrees: (i) not to use any such Confidential and Proprietary Information for himself or others; and (ii) not to take any Company material or reproductions (including but not limited to writings, correspondence, notes, drafts, records, invoices, technical and business policies, computer programs or disks) thereof from the Company's offices at any time during his employment by the Company, except as required in the execution of the Employee's duties to the Company. The Employee agrees to return immediately all Company material and reproductions (including but not limited, to writings, correspondence, notes, drafts, records, invoices, technical and business policies, computer programs or disks) thereof in his possession to the Company upon request and in any event immediately upon termination of employment.

(b) Except with prior written authorization by the Company, the Employee agrees not to disclose or publish any of the Confidential and Proprietary Information, or any confidential, scientific, technical or business information of any other party to whom the Company or any of its affiliates owes an obligation of confidence, at any time during or after his employment with the Company.

(c) Notwithstanding the foregoing, Confidential and Proprietary Information shall not include any information or material which the Employee can establish through competent proof: (i) is or becomes generally available to the public other than as a result of disclosure thereof by the Employee; (ii) is lawfully received by the Employee on a non-confidential basis from a third party that is not itself under an obligation of confidentiality or non-disclosure to the Company with respect to such information; (iii) was in the Employee's possession at the time of disclosure by the Company and was not acquired, directly or indirectly from the Company; or (iv) is required to be publicly disclosed by law or by regulation; provided, however, that in such event Employee shall provide the Company with prompt advance notice of such disclosure so that the Company has the opportunity if it so desires to seek a protective order or other similar protection. If, in the absence of a protective or other similar order, the Employee is legally compelled to disclose Confidential and Proprietary Information, such Confidential and Proprietary Information (and only such Confidential and Proprietary Information) may be disclosed in such proceeding without liability hereunder; provided, however, that the Employee shall give the Company written notice of the Confidential and Proprietary Information to be disclosed as far in advance of its disclosure as is practical and, upon the Company's request and expense, the Employee shall use all reasonable efforts to obtain assurances that confidential treatment will be accorded to such Confidential and Proprietary Information in such proceeding.

(d) The Employee agrees that all inventions, discoveries, improvements and patentable or copyrightable works ("Inventions") initiated, conceived or made by him, either alone or in conjunction with others, during the Term shall be the sole property of the Company to the maximum extent permitted by applicable law and, to the extent permitted by law, shall be "works made for hire" as that term is defined in the United States Copyright Act (17 U.S.C.A., Section 101). The Company shall be the sole owner of all patents, copyrights, trade secret rights, and other intellectual property or other rights in connection therewith. The Employee hereby assigns to the Company all right, title and interest he may have or acquire in all such Inventions; provided, however, that the Board may in its sole discretion agree to waive the Company's rights pursuant to this Section 5(d) with respect to any Invention that is not directly or indirectly related to the Company's business. The Company acknowledges that as of the Effective Date, the Employee has undertaken certain activities prior to the Effective Date and that pursuant thereto has developed the Inventions and/or engaged in such specific activities set forth on Annex A hereto, and that pursuant to the foregoing sentence, the Board has waived the Company's rights with respect to such Inventions and/or activities as they are in existence on the Effective Date. Notwithstanding the foregoing, nothing in this Section 5(d) shall be construed to limit, restrict or modify in any way Executive's obligations under this Agreement, including without limitation Section 3(a) and Section 6 hereof. The Employee further agrees to assist the Company in every proper way (but at the Company's expense) to obtain and from time to time enforce patents, copyrights or other rights on such Inventions in any and all countries, and to that end the Employee will execute all documents necessary:

(i) to apply for, obtain and vest in the name of the Company alone (unless the Company otherwise directs) letters patent, copyrights or other analogous protection in any country throughout the world and when so obtained or vested to renew and restore the same; and

(ii) to defend any opposition proceedings in respect of such applications and any opposition proceedings or petitions or applications for revocation of such letters patent, copyright or other analogous protection.

(e) The Employee acknowledges that while performing the Services under this Agreement the Employee may locate, identify and/or evaluate patented or patentable inventions having commercial potential in the fields of pharmacy, pharmaceutical, biotechnology, healthcare, technology and other fields which may be of potential interest to the Company or one of its affiliates (the "Third Party Inventions"). The Employee understands, acknowledges and agrees that all rights to, interests in or opportunities regarding, all Third-Party Inventions identified by the Company, any of its affiliates or either of the foregoing persons' officers, directors, employees (including the Employee), agents or consultants during the Term shall be and remain the sole and exclusive property of the Company or such affiliate and the Employee shall have no rights whatsoever to such Third-Party Inventions and will. not pursue for himself or for others any transaction relating to the Third-Party Inventions which is not on behalf of the Company; provided, however, that the Company acknowledges and agrees that Employee may, with the Company's prior written consent, discuss the development of any Third Party Inventions that the Employee has located, identified and/or evaluated, and which the Company has decided not to pursue, solely with Paramount Biosciences, LLC ("Paramount"). Notwithstanding the foregoing, the Company acknowledges and agrees that Employee shall be permitted to discuss the development of any Third Party Inventions that the Employee has located, identified and/or evaluated, and which each of the Company and Paramount has decided not to pursue in accordance with the foregoing, provided that such discussions are consented to in advance by each of the Company and Paramount and that such discussions do not conflict with or interfere in any way with Executive's obligations under this Agreement, including without limitation Section 3(a) and Section 6 hereof.

(f) Employee agrees that he will promptly disclose to the Company, or any persons designated by the Company, all improvements and Inventions made or conceived or reduced to practice or learned by him, either alone or jointly with others, during the Term.

(g) The provisions of this Section 5 shall survive any termination of this Agreement.

6. Non-Competition, Non-Solicitation and Non-Disparagement .

(a) **[THE COVENANT AGAINST COMPETITION PREVIOUSLY CONTAINED IN THIS PARAGRAPH 6 (a) IS STRICKEN AS PER SECTION 5(C) OF THE PARTIES' SEPARATION AND GENERAL RELEASE AGREEMENT DATED December 21, 2007.]**

(b) During the Term and for a period of 18 months thereafter, the Employee shall not, directly or indirectly, without the prior written consent of the Company:

(i) solicit or induce any employee of the Company or any of its affiliates to leave the employ of the Company or any such affiliate; or hire for any purpose any employee of the Company or any affiliate or any employee who has left the employment of the Company or any affiliate within one year of the termination of such employee's employment with the Company or any such affiliate [**Remainder of sentence deleted.]** ; or

(ii) solicit or accept employment or be retained by any Person who, at any time during the term of this Agreement, was an agent, client or customer of the Company or any of its affiliates where his position will be related to the business of the Company or any such affiliate; or

(iii) solicit or accept the business of any agent, client or customer of the Company or any of its affiliates with respect to products, services or investments similar to those provided or supplied by the Company or any of its affiliates.

(c) The Company and the Employee each agree that both during the Term and at all times thereafter, neither party shall directly or indirectly disparage, whether or not true, the name or reputation of the other party or any of its affiliates, including but not limited to, any officer, director, employee or shareholder of the Company or any of its affiliates.

(d) In the event that the Employee breaches any provisions of Section 5 or this Section 6 or there is a threatened breach, then, in addition to any other rights which the Company may have, the Company shall (i) be entitled, without the posting of a bond or other security, to injunctive relief to enforce the restrictions contained in such Sections and (ii) have the right to require the Employee to account for and pay over to the Company all compensation, profits, monies, accruals, increments and other benefits (collectively "Benefits") derived or received by the Employee as a result of any transaction constituting a breach of any of the provisions of Sections 5 or 6 and the Employee hereby agrees to account for and pay over such Benefits to the Company. The Employee agrees that in an action pursuant to clause 6 (d)(i), that if the Company makes a prima facie showing that the Employee has violated or apparently intends to violate any of the provisions of this Section 6, the Company need not prove either damage or irreparable injury in order to obtain injunctive relief.

(e) Each of the rights and remedies enumerated in Section 6(d) shall be independent of the others and shall be in addition to and not in lieu of any other rights and remedies available to the Company at law or in equity. If any of the covenants contained in this Section 6, or any part of any of them, is hereafter construed or adjudicated to be invalid or unenforceable, the same shall not affect the remainder of the covenant or covenants or rights or remedies which shall be given full effect without regard to the invalid portions. If any of the covenants contained in this Section 6 is held to be invalid or unenforceable because of the duration of such provision or the area covered thereby, the parties agree that the court making such determination shall have the power to reduce the duration and/or area of such provision and in its reduced form such provision shall then be enforceable. No such holding of invalidity or unenforceability in one jurisdiction shall bar or in any way affect the Company's right to the relief provided in this Section 6 or otherwise in the courts of any other state or jurisdiction within the geographical scope of such covenants as to breaches of such covenants in such other respective states or jurisdictions, such covenants being, for this purpose, severable into diverse and independent covenants.

(f) In the event that an actual proceeding is brought in equity to enforce the provisions of Section 5 or this Section 6, the Employee shall not urge as a defense that there is an adequate remedy at law nor shall the Company be prevented from seeking any other remedies which may be available. The Employee agrees that he shall not raise in any proceeding brought to enforce the provisions of Section 5 or this Section 6 that the covenants contained in such Sections limit his ability to earn a living.

(g) The provisions of this Section 6 shall survive any termination of this Agreement.

7. Representations and Warranties by the Employee .

The Employee hereby represents and warrants to the Company as follows:

(i) Neither the execution or delivery of this Agreement nor the performance by the Employee of his duties and other obligations hereunder violate or will violate any statute, law, determination or award, or conflict with or constitute a default or breach of any covenant or obligation under (whether immediately, upon the giving of notice or lapse of time or both) any prior employment agreement, contract, or other instrument to which the Employee is a party or by which he is bound.

(ii) The Employee has the full right, power and legal capacity to enter and deliver this Agreement and to perform his duties and other obligations hereunder. This Agreement constitutes the legal, valid and binding obligation of the Employee enforceable against him in accordance with its terms. No approvals or consents of any persons or entities are required for the Employee to execute and deliver this Agreement or perform his duties and other obligations hereunder.

10. Miscellaneous .

(a) This Agreement shall be governed by, and construed and interpreted in accordance with, the laws of the State of New York, without giving effect to its principles of conflicts of laws.

(b) **[THE ARBITRATION PROVISION PREVIOUSLY CONTAINED IN THIS PARAGRAPH 10(B) IS STRICKEN HEREIN.]**

(c) This Agreement shall be binding upon and inure to the benefit of the parties hereto, and their respective heirs, legal representatives, successors and permitted assigns.

(d) This Agreement, and the Executive's rights and obligations hereunder, may not be assigned by the Executive. The rights and obligations of the Company under this Agreement shall inure to the benefit of and shall be binding upon the successors and permitted assigns of the Company, including any successors or permitted assigns in connection with any sale, transfer or other disposition of all or substantially all of its business or assets.

(e) This Agreement cannot be amended orally, or by any course of conduct or dealing, but only by a written agreement signed by the parties hereto.

(f) The failure of either party to insist upon the strict performance of any of the terms, conditions and provisions of this Agreement shall not be construed as a waiver or relinquishment of future compliance therewith, and such terms, conditions and provisions shall remain in full force and effect. No waiver of any term or condition of this Agreement on the part of either party shall be effective for any purpose whatsoever unless such waiver is in writing and signed by such party.

(g) All notices, requests, consents and other communications, required or permitted to be given hereunder, shall be in writing and shall be delivered personally or by an overnight courier service or sent by registered or certified mail, postage prepaid, return receipt requested, to the parties at the addresses set forth on the first page of this Agreement, and shall be deemed given when so delivered personally or by overnight courier, or, if mailed, five days after the date of deposit in the United States mails. Either party may designate another address, for receipt of notices hereunder by giving notice to the other party in accordance with this Section 10(g).

(h) This Agreement sets forth the entire agreement and understanding of the parties relating to the subject matter hereof, and supersedes all prior agreements, arrangements and understandings, written or oral, relating to the subject matter hereof. No representation, promise or inducement has been made by either party that is not embodied in this Agreement, and neither party shall be bound by or liable for any alleged representation, promise or inducement not so set forth.

(i) As used in this Agreement, "affiliate" of a specified Person shall mean and include any Person controlling, controlled by or under common control with the specified Person.

(j) The section headings contained herein are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.

(k) This Agreement may be executed in any number of counterparts, each of which shall constitute an original, but all of which together shall constitute one and the same instrument.

(l) As used in this Agreement, the masculine, feminine or neuter gender, and the singular or plural, shall be deemed to include the others whenever and wherever the context so requires. Additionally, unless the context requires otherwise, "or" is not exclusive.

JOINT VENTURE AGREEMENT

THIS JOINT VENTURE AGREEMENT (this " Agreement ") is entered into as of January 31, 2008 by and between Manhattan Pharmaceuticals, Inc., a Delaware corporation (" MHA ") and Nordic Biotech Venture Fund II K/S, a Danish limited liability partnership (" Nordic ").

WITNESSETH:

WHEREAS, MHA and Nordic wish to enter into a joint venture arrangement by which Nordic contributes capital to a newly formed limited partnership known as Hedrin Pharmaceuticals K/S or such other name as is selected by MHA and Nordic (" Newco "), and MHA assigns and contributes the Assets (as defined below) to Newco;

WHEREAS, upon the consummation of the transactions contemplated by the Contribution Agreement (as defined below), and the execution and delivery by each of MHA and Nordic of the Partnership Agreement, MHA will own 50% of the partnership shares of Newco and Nordic will own 50% of the partnership shares of Newco (as such interest may be constituted from time to time, including as reduced pursuant to the terms hereof, the " Nordic Interest ");

WHEREAS, MHA desires to grant to Nordic a put option with respect to the Nordic Interest, and Nordic desires to grant to MHA a call option with respect to the Nordic Interest, each in accordance with the terms and conditions of this Agreement, which shall be effective as of the Closing Date (as defined below); and

WHEREAS, in consideration of the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby, MHA will (i) grant a warrant to purchase the Warrant Shares (as defined below) to Nordic and (ii) nominate a Nordic representative to MHA's board of directors.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

1. Definitions . The following terms shall have the following meanings given to them:

" Additional Agreements " means the Contribution Agreement, the Partnership Agreement, the Services Agreement, the Warrant, the Registration Rights Agreement and any officer's certificate delivered at the Closing.

" Adjusted Transaction Price " means the Transaction Price as adjusted in accordance with Section 5 hereof.

" Assets " means that term as defined in the Contribution Agreement.

" Business Day " means any day except Saturday, Sunday and any day that is a federal legal holiday or a day on which banking institutions in the state of New York are authorized or required by law or other governmental action to close.

" Call Closing " shall have the meaning set forth in Section 4.3 of this Agreement.

" Call Closing Date " shall have the meaning set forth in Section 4.3 of this Agreement.

" Call Consideration " means a number of shares of Common Stock determined in accordance with the following formula:

$$\frac{\text{(Investment Amount)*(1 - Call Reduction Factor)}}{\text{(Adjusted Transaction Price)}}$$

" Call Event " means the occurrence of thirty consecutive business days on which the closing sale price of the Common Stock as reported on the Trading Market exceeds seven and a half times the Transaction Price (the " Threshold Price ").

" Call Notice " shall have the meaning set forth in Section 4.1 of this Agreement.

" Call Option " shall have the meaning set forth in Section 4.1 of this Agreement.

" Call Reduction Factor " shall have the meaning set forth in Section 4.3 of this Agreement.

" Common Stock " means the common stock of MHA, par value $0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed into.

" Common Stock Equivalents " means any securities of MHA which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

" Contribution Agreement " means that certain Assignment and Contribution Agreement to be entered into by and between MHA and Nordic in the form attached hereto as Exhibit A .

" Conversion Factor " means (i) 1.00 at such time as Nordic Distributions are less than the Investment Amount, (ii) 1.25 at such time as Nordic Distributions are less than two times the Investment Amount but greater than or equal to the Investment Amount, (iii) 1.50 at such time as Nordic Distributions are less than three times the Investment Amount but greater than or equal to two times the Investment Amount, (iv) 2.00 at such time as Nordic Distributions are less than four times the Investment Amount but greater than or equal to three times the Investment Amount, and (v) 3.00 at such time as Nordic Distributions are greater than or equal to four times the Investment Amount.

" Conversion Percentage " means the percentage of the Nordic Interest that Nordic chooses to put pursuant to the Put Option set forth in Section 3.1.

" Conversion Shares " means the shares of Common Stock issuable upon exercise of the Warrants, the Put Option and the Call Option.

" Disclosure Schedules " means the Disclosure Schedules of MHA delivered concurrently herewith.

" Exempt Issuance " means the issuance of (a) shares of Common Stock or options to employees, officers or directors of MHA pursuant to any stock or option plan in effect on the date hereof or hereafter duly adopted for such purpose by a majority of the non-employee members of the Board of Directors of MHA or a majority of the members of a committee of non-employee directors, (b) securities upon the exercise or exchange of or conversion of any securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date hereof, provided that such securities have not been amended since the date hereof to increase the number of such securities or to decrease the exercise, exchange or conversion price of such securities, (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of MHA, but shall not include a transaction in which MHA is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities, and (d) less than 50,000 shares of Common Stock (subject to adjustment for stock splits, stock combinations, and the like), in the aggregate, which do not otherwise meet the conditions of clauses (a), (b) or (c) of this definition.

" General Partner " means a Danish private limited company that is the general partner of Newco.

" Investment Amount " means $2,500,000 if the Milestone Payment has not occurred, and $5,000,000 if the Milestone Payment has occurred.

" Maximum Return Date " means the later to occur of (i) the date that is thirty days after the date that Nordic Distributions exceed five times the Investment Amount, and (ii) the date that is ten days after the Nordic Distributions exceed five times the Investment Amount and MHA has provided written notice thereof to Nordic.

" Milestone Payment " means the payment by Nordic of an additional $2,500,000 to Newco after the satisfaction of the Payment Milestone (as defined in the Contribution Agreement).

" Nordic Distributions " means aggregate dividends or distributions from Newco actually received by Nordic.

" Partnership Agreement " means the Limited Partnership Agreement to be entered into by Nordic, MHA and the General Partner in the form attached hereto as Exhibit B .

" Person " means any individual, corporation, general or limited partnership, limited liability company, joint venture, estate, trust, association, organization, labor union, or other entity or governmental body.

" Proceeding " means any action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

" Put Consideration " means a number of shares of Common Stock determined in accordance with the following formula:

$$\frac{\text{(Investment Amount)*(Conversion Percentage)}}{\text{(Adjusted Transaction Price)*(Conversion Factor)}}$$

" Put Closing " shall have the meaning set forth in Section 3.2 of this Agreement.

" Put Closing Date " shall have the meaning set forth in Section 3.2 of this Agreement.

" Put Notice " shall have the meaning set forth in Section 3.1 of this Agreement.

" Put Option " shall have the meaning set forth in Section 3.1 of this Agreement.

" Registration Rights Agreement " means that certain Registration Rights Agreement to be entered into by and between MHA and Nordic in the form attached hereto as Exhibit C .

" Representative " means with respect to a particular Person, any director, officer, employee, agent, consultant, advisor, or other representative of such Person, including legal counsel, accountants, and financial advisors.

" Securities " means, collectively, the Warrant and the Put Option.

" Securities Act " means the Securities Act of 1933, as amended.

" Trading Day " means any day on which the principal national securities exchange on which the Common Stock is admitted to trading or listed is open for trading, or if there is no such exchange or market, then any day except Saturdays, Sundays or federal holidays.

" Trading Market " means whichever of the New York Stock Exchange, the American Stock Exchange, the Nasdaq Global Market, the Nasdaq Global Select Market, the Nasdaq Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted on the date in question.

" Transaction Price " means $0.14, as adjusted for stock dividends, combinations, stock splits, recapitalizations and reorganizations .

" Warrant Shares " means 7,142,857 shares of Common Stock.

2. Joint Venture Closing .

2.1 Closing Mechanics . The closing shall be held on February 18, 2008, or such earlier date as MHA and Nordic agree following the satisfaction or waiver of the closing conditions set forth in Section 2.3 hereof (the " Closing Date "). The Closing shall occur at the offices of MHA.

2.2 Deliveries .

(a) Upon satisfaction or waiver of all conditions of Nordic to the Closing, Nordic shall:

(i) execute and deliver the Partnership Agreement and capitalize Newco in accordance with the terms thereof;

(ii) execute and deliver the Shareholders Agreement attached hereto as Exhibit D and capitalize the General Partner in accordance with the terms thereof;

(iii) cause Newco to execute, deliver and perform under the Contribution Agreement;

(iv) cause Newco to execute and deliver the Services Agreement, in the form attached hereto as Exhibit E (the " Services Agreement ") ;

(v) execute and deliver the Registration Rights Agreement; and

(vi) pay US$150,000 to MHA in consideration of the right to the issuance of the Warrant in the form attached hereto as Exhibit F for the Warrant Shares (the "Warrant") pursuant to Section 3.3.

(b) Upon satisfaction or waiver of all conditions of MHA to the Closing, MHA shall:

(i) execute and deliver the Partnership Agreement and capitalize Newco in accordance with the terms thereof;

(ii) execute and deliver the Shareholders Agreement attached hereto as Exhibit C and capitalize the General Partner in accordance with the terms thereof;

(iii) execute, deliver and perform under the Contribution Agreement;

(iv) execute and deliver the Services Agreement; and

(v) execute and deliver the Registration Rights Agreement .

2.2 Closing Conditions .

(a) MHA's obligations in connection with the Closing hereunder are subject to the fulfillment on or prior to the Closing of the following conditions, which conditions may be waived at the option of MHA to the extent permitted by law:

(i) Representations and Warranties Correct . The representations and warranties made by Nordic in Section 7 hereof shall be true and correct when made, and shall be true and correct in all material respects (if not qualified by materiality) and all respects (if qualified by materiality) on and as of the Closing Date (except for any representation or warranty that speaks as of a specific date, which shall be true and correct as of such date).

(ii) Covenants . All covenants, agreements and conditions contained in this Agreement to be performed by Nordic on or prior to the Closing Date shall have been performed or complied with in all material respects.

(iii) Closing Certificate . MHA shall have received a certificate executed by an officer of Nordic certifying that each of the conditions described in Sections 2.2(a)(i) and (ii) of this Agreement have been satisfied as of the Closing Date.

(iv) No Legal Order Pending . There shall not then be in effect any legal or other order enjoining or restraining the transactions contemplated by this Agreement.

(b) Nordic's obligations in connection with the Closing hereunder are subject to the fulfillment on or prior to the Closing of the following conditions, which conditions may be waived at the option of each Nordic to the extent permitted by law:

(i) Representations and Warranties Correct . The representations and warranties made by MHA in Section 8 hereof shall be true and correct when made, and shall be true and correct in all material respects (if not qualified by materiality) and all respects (if qualified by materiality) on and as of the Closing Date (except for any representation or warranty that speaks as of a specific date, which shall be true and correct as of such date).

(ii) Covenants . All covenants, agreements and conditions contained in this Agreement to be performed by MHA on or prior to the Closing Date shall have been performed or complied with in all material respects.

(iii) Closing Certificate . Nordic shall have received a certificate executed by the chief executive officer or chief financial officer of MHA certifying that each of the conditions described in Sections 2.2(b)(i) and (ii) of this Agreement have been satisfied as of the Closing Date.

(iv) No Legal Order Pending . There shall not then be in effect any legal or other order enjoining or restraining the transactions contemplated by this Agreement.

(v) Legal Opinion . Nordic shall have received an opinion of counsel to MHA in a form reasonably acceptable to Nordic that contains the opinions set forth in Exhibit G .

(vi) Consent of Third Parties . MHA shall have received all requisite consents and approvals of all third parties whose consent or approval is required in order for each of MHA and Nordic to consummate the transactions contemplated by this Agreement.

(vii) Approval of MHA's Board of Directors and Stockholders . MHA's Board of Directors, and if necessary, MHA's stockholders, shall have approved the transactions contemplated by this Agreement.

(viii) Due Diligence . The results of Nordic's financial, technical and legal due diligence of MHA, the Securities and the Assets shall be satisfactory to Nordic in its commercially reasonable discretion.

(ix) Material Adverse Effect . There shall be no Material Adverse Effect, and since the date of this Agreement, there shall have been no Material Adverse Effect.

(x) Registration Rights . Any outstanding registration rights relating to MHA securities shall have been subordinated to the rights of Nordic under the Registration Rights Agreement.

(xi) Shareholder Notice . MHA shall have satisfied all of the requirements of Section 710(b) of the Amex Company Guide of the American Stock Exchange, if applicable, including the submission of the written application to the Exchange's Listing Qualifications Department, the notice to MHA's shareholders and the public announcement of the transaction.

3. Put Option .

3.1 At any time or times after the Closing Date and prior to the earlier of the Maximum Return Date and the tenth anniversary of the Closing Date, Nordic may, by written notice to MHA (the " Put Notice "), elect to sell to MHA (and MHA hereby agrees to purchase from Nordic) all or a part of the Nordic Interest, as specified in the Put Notice, for the Put Consideration (the " Put Option ").

3.2 The closing of the Put Option (the " Put Closing ") shall take place simultaneously with the receipt by MHA of the Put Notice together with certificates evidencing the portion of the Nordic Interest being put, together with assignments, duly executed in blank, in proper form to transfer such portion of the Nordic Interest. MHA will, no later than three Trading Days following the Put Closing, deliver or cause to be delivered to Nordic a certificate representing the Put Consideration t o Nordic. If such shares do not require a legend in accordance with this Agreement, the c ertificates representing the Put Consideration shall be transmitted by the transfer agent of MHA to Nordic by crediting the account of Nordic's prime broker with the Depository Trust Company System.

3.3 In the event that Nordic achieves its Put Option milestone by not exercising its Put Option, in whole or in part, on or before April 30, 2008, MHA shall within five (5) Business Days thereafter issue and deliver the Warrant to Nordic.

4. Call Option .

4.1 Upon the occurrence of a Call Event and prior to the fifth anniversary of the Closing Date, MHA may, by written notice to Nordic (the " Call Notice "), elect to purchase from Nordic (and Nordic hereby agrees to sell to MHA) portions of the Nordic Interest for the Call Consideration at the following rate (the " Call Option "):

(a) during the first thirty-day period following the occurrence of a Call Event , MHA may purchase up to 25% of the Nordic Interest;

(b) during the second thirty-day period following the occurrence of a Call Event, MHA may purchase up to 50% of the Nordic Interest less that portion of the Nordic Interest previously purchased by MHA pursuant to Section 4.1(a);

(c) during the third thirty-day period following the occurrence of a Call Event, MHA may purchase up to 75% of the Nordic Interest less that portion of the Nordic Interest previously purchased by MHA pursuant to Section 4.1(a) or (b); and

(d) during the fourth thirty-day period following the occurrence of a Call Event, MHA may purchase up to 100% of the Nordic Interest less that portion of the Nordic Interest previously purchased by MHA pursuant to Section 4.1(a), (b) or (c).

4.2 Notwithstanding anything to the contrary contained herein, in order to exercise the Call Option, the closing sale price of the Common Stock as reported on the Trading Market must exceed the Threshold Price on each consecutive trading day from the date of occurrence of the Call Event until the date of delivery of the Call Notice.

4.3 Notwithstanding Section 4.1, Nordic may elect to reduce by a percentage specified by Nordic (the " Call Reduction Factor ") the amount of the Nordic Interest that may be called pursuant to the Call Option, by delivering to MHA, within fifteen days after receipt of the Call Notice, a written notice indicating the Call Reduction Factor and agreeing to one of the following: (i) that the amount of the Nordic Interest that may be put by Nordic shall be reduced by the same factor (i.e., the Call Reduction Factor), or (ii) that Nordic shall pay an amount, within fifteen days of the date of such notice, to MHA equal to $2,000,000 times the Call Reduction Factor.

4.4 The closing of the Call Option (the " Call Closing ") shall take place at the offices of MHA at 10:00 a.m. (Eastern Standard Time) on the date that is thirty (30) days from the date of the delivery of the Call Notice, or such earlier date as MHA and Nordic may agree (the " Call Closing Date "). At the Call Closing, Nordic will deliver to MHA any certificates evidencing the portion of the Nordic Interest being called, together with assignments, duly executed in blank, in proper form to transfer such portion of the Nordic Interest, and MHA shall provide certificates representing the Call Consideration to Nordic.

5. Adjustments to Transaction Price .

5.1 I f MHA, at any time while either of the Put Option or the Call Option remains outstanding, shall sell or grant any option, warrant or right to purchase, or sell or grant any right to reprice its securities, or otherwise dispose of or issue (or announce any offer, sale, grant or any option to purchase or other disposition) any Common Stock or Common Stock Equivalents entitling any Person to acquire shares of Common Stock, at an effective price per share less than the Transaction Price (such lower price, the " Base Share Price " and such issuances collectively, a " Dilutive Issuance ") (if the holder of the Common Stock or Common Stock Equivalents so issued shall at any time, whether by operation of purchase price adjustments, reset provisions, floating conversion, exercise or exchange prices or otherwise, or due to warrants, options or rights per share which are issued in connection with such issuance, be entitled to receive shares of Common Stock at an effective price per share which is less than the Transaction Price, such issuance shall be deemed to have occurred for less than the Transaction Price on such date of the Dilutive Issuance), then the Transaction Price shall be reduced and only reduced to equal the Base Share Price. If shares of Common Stock or Common Stock Equivalents are issued or sold together with other stock or securities or other assets of MHA for a consideration which covers both, the effective price per share shall be computed with regard to the portion of the consideration so received that may be reasonably determined in good faith by the Board of Directors, to be allocable to such Common Stock or Common Stock Equivalents. Such adjustment shall be made whenever such Common Stock or Common Stock Equivalents are issued. Notwithstanding the foregoing, no adjustments shall be made, paid or issued hereunder in respect of an Exempt Issuance.

5.2 MHA shall notify Nordic in writing, no later than the day following the issuance of any Common Stock or Common Stock Equivalents subject to this Section, indicating therein the applicable issuance price, or applicable reset price, exchange price, conversion price and other pricing terms (such notice the " Dilutive Issuance Notice "). For purposes of clarification, whether or not MHA provides a Dilutive Issuance Notice pursuant to this Section, upon the occurrence of any Dilutive Issuance, after the date of such Dilutive Issuance the Transaction Price shall equal the Base Share Price regardless of whether Nordic accurately refers to the Base Share Price in the Put Notice or MHA accurately refers to the Base Share Price in the Call Notice.

6. Board Representation .

6.1 For so long as Nordic continues to have beneficial ownership of at least ten percent (10%) of the outstanding Common Stock of MHA (including shares of Common Stock issuable upon exercise of the Put Option, the Call Option and/or the Warrant), MHA shall provide Nordic written notice of any shareholder solicitation or action relating to the election of directors thirty (30) days prior to providing notice of any shareholder meeting or any written consent to MHA's stockholders. After receipt of such notice, Nordic may, by written notice sent to MHA within ten (10) days of receipt of such notice, request that MHA nominate, and MHA shall nominate, for election to MHA's Board of Directors (the " Board of Directors "), in connection with such shareholder solicitation or action, one candidate designated by Nordic (the " Nordic Designee "). In the event that Nordic shall desire to appoint a Nordic Designee otherwise than in connection with a shareholder solicitation or action relating to the election of directors, then as soon as practicable upon written notice from Nordic, MHA shall appoint a Nordic Designee to the Board of Directors. If MHA reasonably determines in good faith that any Nordic Designee fails to meet any of the criteria for service on the board of directors as set forth by applicable state law, the rules and regulations of the Securities and Exchange Commission or any exchange on which the securities of MHA are then listed, then MHA shall provide written notice of such determination (and the reasons therefor) to Nordic and provide Nordic the opportunity to either designate an alternative candidate or re-designate the original candidate if Nordic reasonably determines in good faith that MHA's reasons are invalid.

6.2 For purposes of this Agreement, all shares held by an affiliate (as defined in Rule 405 promulgated under the Securities Act) of Nordic will be deemed to be owned by Nordic.

6.3 MHA shall use its best efforts (a) to cause to be voted the shares for which MHA's management or the Board of Directors holds proxies or is otherwise entitled to vote in favor of the election of the Nordic Designee nominated pursuant to this Agreement; and (b) to cause the Board of Directors to recommend to its shareholders that they vote in favor of the Nordic Designee.

6.4 In the event that any Nordic Designee shall cease to serve as a director of MHA for any reason, the Board of Directors of MHA shall fill the vacancy resulting therefrom with another Nordic Designee, unless Nordic declines to designate a replacement Nordic Designee.

6.5 MHA shall provide the same compensation and rights and benefits of indemnity to the Nordic Designee as are provided to other non-employee directors.

6.6 MHA agrees that as of the Closing Date, the size of the Board of Directors shall be seven members, including the chief executive officer and the Nordic Designee (if a Nordic Designee shall have been appointed by such time).

7. Representations, Warranties and Covenants of Nordic .

Nordic hereby represents, warrants and covenants, now and as of the Closing Date, as the case may be, as follows:

7.1 Nordic has all requisite legal power and authority to enter into this Agreement, to consummate the transactions contemplated hereby and to carry out and perform its obligations under the terms of this Agreement.

7.2 This Agreement has been duly executed and delivered by Nordic and constitutes a legal, valid and binding obligation of Nordic enforceable against Nordic in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies, and to limitations of public policy. N either the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby nor compliance with any of the provisions hereof will violate or conflict with the provisions of, or constitute a default under (or give rise to any right of termination, cancellation or acceleration under), any agreement, contract or other instrument to which Nordic is bound.

7.3 Neither the Securities nor the Conversion Shares have not been registered under the Securities Act, or any state securities laws, and, except as set forth in Registration Rights Agreement, MHA has no present or future obligation to register either the Securities or the Conversion Shares under the Securities Act or any state securities laws. Nordic understands that the offering and sale of the Securities hereunder is intended to be exempt from registration under the Securities Act, by virtue of Section 4(2) thereof and the provisions of Regulation D promulgated thereunder, or not subject to such requirement, by virtue of Regulation S promulgated under the Securities Act, based, in part, upon the representations, warranties and agreements of Nordic contained in this Agreement.

7.4 Nordic has had access to all SEC Reports (as defined below) and has received all other documents from MHA requested by Nordic. Nordic has carefully reviewed the SEC Reports and all such other documents and understands the information contained therein.

7.5 Nordic has had a reasonable opportunity to ask questions of and receive answers from a person or persons acting on behalf of MHA concerning the offering and sale of the Securities and the business, financial condition, results of operations and prospects of MHA, and all such questions have been answered to the full satisfaction of Nordic. Neither such inquiries nor any other investigation conducted by or on behalf of Nordic or its representatives or counsel shall modify, amend or affect Nordic's right to rely on the truth, accuracy and completeness of MHA's representations and warranties contained in this Agreement.

7.6 In evaluating the suitability of an investment in MHA, Nordic has not relied upon any representation or other information (oral or written) other than as stated in this Agreement.

7.7 No Securities were offered or sold to Nordic by means of any form of general solicitation or general advertising, and in connection therewith Nordic did not: (A) receive or review any advertisement, article, notice or other communication published in a newspaper or magazine or similar media or broadcast over television or radio whether closed circuit, or generally available; or (B) attend any seminar meeting or industry investor conference whose attendees were invited by any general solicitation or general advertising.

7.8 Nordic has taken no action which would give rise to any claim by any person for brokerage commissions, finders' fees or the like relating to this Agreement or the transactions contemplated hereby.

7.9 Nordic has such knowledge and experience in financial, tax, and business matters, and, in particular, investments in securities similar to the Securities so as to enable Nordic to utilize the information made available to it in connection with the transactions contemplated by this Agreement to evaluate the merits and risks of an investment in the Securities and MHA and to make an informed investment decision with respect thereto.

7.10 Nordic is not relying on MHA or any of its employees, officers or agents with respect to the legal, tax, economic and related considerations as to an investment in the Securities, and Nordic has relied on the advice of, or has consulted with, only his own advisors.

7.11 Nordic is acquiring the Securities solely for Nordic's own account for investment and not with a view to resale, assignment or distribution thereof, in whole or in part in violation of the Securities Act or any applicable state securities laws. Nordic has no agreement or arrangement, formal or informal, with any person to sell or transfer all or any part of the Securities in violation of the Securities Act or any state securities laws and Nordic has no plans to enter into any such agreement or arrangement. Nordic will not engage in hedging transactions with respect to the Securities unless in compliance with the registration requirements of the Securities Act.

7.12 Nordic must bear the substantial economic risks of the investment in the Securities indefinitely because none of the Securities may be sold, hypothecated or otherwise disposed of unless subsequently registered under the Securities Act and applicable state securities laws or an exemption from such registration is available. Subject to the terms hereunder, legends shall be placed on the Securities to the effect that they have not been registered under the Securities Act or applicable state securities laws and appropriate notations thereof will be made in MHA's stock books.

7.13 Nordic has adequate means of providing for its current financial needs and foreseeable contingencies and has no need for liquidity of the investment in the Securities for an indefinite period of time.

7.14 Nordic meets the requirements of the suitability standards for an "accredited investor" because Nordic is a corporation, partnership, limited liability company, limited liability partnership, other entity or similar business trust, not formed for the specific purpose of acquiring the Securities, with total assets excess of $5,000,000 or (ii) is a "non-US Person" that is a "qualified investor" as defined in the European Union Prospective Directive. Nordic further represents and warrants that it will notify and supply corrective information to MHA immediately upon the occurrence of any change occurring prior to MHA's issuance of the Securities that renders the representation made in the immediately preceding sentence. Nordic represents to MHA that any information which the undersigned has heretofore furnished under this Section 7.14 or furnishes to MHA pursuant to this Section 7.14 is complete and accurate and may be relied upon by MHA in determining the availability of an exemption from registration under Federal and state securities laws in connection with the offering and sale of the Securities.

7.15 Nordic is able to bear the economic risk of an investment in the Securities and, at the present time, has a sufficient net worth to sustain a complete loss of such investment in MHA in the event such a loss should occur. Nordic's overall commitment to investments which are not readily marketable is not excessive in view of its net worth and financial circumstances and the purchase of the Units will not cause such commitment to become excessive.

8. Representations and Warranties of MHA .

MHA hereby represents and warrants as of the date of this Agreement, and as of the Closing Date, as the case may be, as follows, subject to the disclosure provided in a written disclosure schedule provided to Nordic as of the date of this Agreement, if any:

8.1 Organization, Good Standing and Qualification . MHA is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as currently conducted. MHA is duly qualified as a foreign corporation to do business and is in good standing in every jurisdiction in which the property owned or leased by it or the nature of the business conducted by it makes such qualification necessary, except to the extent that the failure to be so qualified or in good standing would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on the business, operations, conditions (financial or otherwise), properties, assets, liabilities, or results of operations of MHA (a **"** Material Adverse Effect **"**). Other than Newco, MHA has no Subsidiaries. For purposes of this Section, **"** Subsidiary **"** means any corporation, partnership, limited liability company, association, or other business entity in which MHA owns or controls, directly or indirectly, any interest, including, without limitation, any joint venture, partnership, or similar arrangement.

8.2 Capitalization . The authorized capital stock of MHA consists of 150,000,000 shares of Common Stock and 1,500,000 shares of preferred stock. As of January 29, 2008, there were 70,624,232 shares of Common Stock issued and outstanding, all of which are duly authorized, validly issued, fully paid and non-assessable, and no shares of preferred stock outstanding. In addition, as of such date, there are 8,233,838 shares of Common Stock reserved for issuance pursuant to outstanding options and 8,869,454 shares of Common Stock reserved for issuance pursuant to outstanding warrants. All of the securities issued by MHA have been issued in accordance with all applicable federal and state securities laws. Other than as set forth above, there are no other options, warrants, calls, rights, commitments or agreements of any character to which MHA is a party or by which MHA is bound or obligating MHA to issue, deliver, sell, repurchase or redeem, or cause to be issued, delivered, sold, repurchased or redeemed, any shares of the capital stock of MHA or obligating MHA to grant, extend or enter into any such option, warrant, call, right, commitment or agreement. There are no preemptive rights or rights of first refusal or similar rights which are binding on MHA permitting any Person to subscribe for or purchase from MHA shares of its capital stock pursuant to any provision of law, MHA's Certificate of Incorporation as in effect on the date hereof (the " Certificate of Incorporation ") or MHA's By-laws, as in effect on the date hereof (the " By-laws ") or by agreement or otherwise. There are no securities or instruments containing anti-dilution or similar provisions that will be triggered by the issuance of the Securities as described in this Agreement.

8.3 Authorization; Enforceability . MHA has all corporate right, power and authority to enter into this Agreement and the Additional Agreements, to consummate the transactions contemplated hereby and to carry out and perform its obligations under the terms of this Agreement and the Additional Agreements. All corporate action on the part of MHA, its directors and stockholders necessary for the (a) authorization execution, delivery and performance of this Agreement and the Additional Agreements by MHA; and (b) authorization, sale, issuance and delivery of the Securities and the Conversion Shares contemplated hereby and the performance of MHA's obligations hereunder has been taken (or, with respect to the Additional Agreements, will have been taken prior to the Closing). This Agreement has been, and the Additional Agreements will be prior to Closing, duly executed and delivered by MHA, and this Agreement constitutes, and the Additional Agreements will constitute prior to Closing, legal, valid and binding obligations of MHA, enforceable against MHA in accordance with their terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies, and to limitations of public policy. The Securities, when issued and fully paid for in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable. The Conversion Shares, when issued in accordance with the terms of the Warrant, the Put Option or the Call Option, as the case may be, will be validly issued, full paid and non-assessable. The issuance and sale of the Securities and the Conversion Shares contemplated hereby will not give rise to any preemptive rights or rights of first refusal on behalf of any person which have not been waived.

8.4 No Conflict; Governmental Consents .

(a) Except as would not reasonably be expected to have a Material Adverse Effect, the execution and delivery by MHA of this Agreement and the Additional Agreements, the consummation of the transactions contemplated hereby and the compliance with any of the provisions hereof will not result in the violation of any law, statute, rule, regulation, order, writ, injunction, judgment or decree of any court or governmental authority to or by which MHA is bound, or of any provision of the Certificate of Incorporation or By-Laws of MHA, and will not conflict with, or result in a breach or violation of, any of the terms or provisions of, or constitute (with due notice or lapse of time or both) a default under (or give rise to any right of termination, cancellation or acceleration under), any lease, loan agreement, mortgage, security agreement, trust indenture or other agreement or instrument to which MHA is a party or by which it is bound or to which any of its properties or assets is subject, nor result in the creation or imposition of any lien upon any of the properties or assets of MHA.

(b) Other than the approval of the American Stock Exchange, no consent, approval, authorization or other order of any governmental authority or other third party is required to be obtained by MHA in connection with the authorization, execution and delivery of this Agreement or with the authorization, issue and sale of the Securities and the Conversion Shares except such filings as may be required to be made with the SEC and with any state or foreign blue sky or securities regulatory authority relating to an exemption from registration thereunder.

8.5 Licenses . Except as would not reasonably be expected to have a Material Adverse Effect, MHA has sufficient licenses, permits and other governmental authorizations currently required for the conduct of its business or ownership of properties and is in all material respects complying therewith.

8.6 Litigation . There is no pending, or to MHA's knowledge, threatened legal or governmental proceedings against MHA which (a) adversely questions the validity of this Agreement or any agreements related to the transactions contemplated hereby or the right of MHA to enter into any of such agreements, or to consummate the transactions contemplated hereby or thereby or (b) could, if there were an unfavorable decision, have a Material Adverse Effect. There is no action, suit, proceeding or investigation by MHA currently pending in any court or before any arbitrator or that MHA intends to initiate.

8.7 Investment Company . MHA is not an "investment company" within the meaning of such term under the Investment Company Act of 1940, as amended, and the rules and regulations of the SEC thereunder.

8.8 Financial Statements; SEC Reports . The financial statements of MHA included in the SEC Reports (as amended) (the " Financial Statements ") fairly present in all material respects the financial condition and position of MHA at the dates and for the periods indicated, have been prepared in conformity with generally accepted accounting principles in the United States (" GAAP ") consistently applied throughout the periods covered thereby, except as may be otherwise specified in such Financial Statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of MHA as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. Since the date of the most recent balance sheet included as part of the Financial Statements and except as disclosed in the SEC Reports, there has not been: (i) any change in the business, conditions (financial or otherwise), properties, assets, liabilities, or results of operations of MHA from that reflected in the Financial Statements, other than changes in the ordinary course of business, none of which individually or in the aggregate would reasonably be expected to have a Material Adverse Effect; or (ii) any other event or condition of any character that, either individually or cumulatively, would reasonably be expected to have a Material Adverse Effect, except for the expenses incurred in connection with the transactions contemplated by this Agreement. MHA has filed all reports, schedules, forms, statements and other documents required to be filed by it under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, since February 1, 2006 (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the " SEC Reports ") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act and the rules and regulations of the SEC promulgated thereunder, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

8.9 Title to Properties and Assets; Liens, Etc . MHA has good and marketable title to its properties and assets, including the properties and assets reflected in the most recent balance sheet included in the Financial Statements, and good title to its leasehold estates, in each case subject to no mortgage, pledge, lien, lease, encumbrance or charge, other than (a) those resulting from taxes which have not yet become delinquent; (b) liens and encumbrances which do not materially detract from the value of the property subject thereto or materially impair the operations of MHA; (c) those that have otherwise arisen in the ordinary course of business; and (d) those that would not reasonably be expected to have a Material Adverse Effect. MHA is in compliance with all material terms of each lease to which it is a party or is otherwise bound.

8.10 Compliance . MHA (a) neither is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by MHA under), nor has MHA received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (b) is not in violation of any order of any court, arbitrator or governmental body, and (c) is not and has not been in violation of any statute, rule or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws applicable to its business, except in the case of each of (a), (b), and (c) as could not have a Material Adverse Effect.

8.11 Obligations to Related Parties . There are no obligations of MHA to officers, directors, stockholders, or employees of MHA other than (a) for payment of salary or other compensation for services rendered, (b) reimbursement for reasonable expenses incurred on behalf of MHA, (c) standard indemnification provisions in the certificate of incorporation and by-laws, and (d) for other standard employee benefits made generally available to all employees (including stock option agreements outstanding under any stock option plan approved by the Board of Directors of MHA). Except as may be disclosed in the Financial Statements, MHA is not a guarantor or indemnitor of any indebtedness of any other person, firm or corporation.

8.12 Employee Relations; Employee Benefit Plans . MHA is not a party to any collective bargaining agreement or union contract. MHA believes that its relations with its employees are good. No executive officer (as defined in Rule 501(f) of the Securities Act) of MHA has notified MHA that such officer intends to leave MHA or otherwise terminate such officer's employment with MHA. MHA is in compliance with all federal, state, local and foreign laws and regulations respecting employment and employment practices, terms and conditions of employment and wages and hours, except where failure to be in compliance would not, either individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect. Except as disclosed in the Memorandum, MHA does not maintain any compensation or benefit plan, agreement, arrangement or commitment (including, but not limited to, "employee benefit plans", as defined in Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (**"** ERISA **"**) for any present or former employees, officers or directors of MHA or with respect to which MHA has liability or makes or has an obligation to make contributions, other than any such plans, agreements, arrangements or commitments made generally available to MHA's employees.

8.13 Environmental Laws . MHA (i) is in compliance with any and all Environmental Laws (as hereinafter defined), (ii) has received all permits, licenses or other approvals required of it under applicable Environmental Laws to conduct its business and (iii) is in compliance with all terms and conditions of any such permit, license or approval where, in each of the foregoing clauses (i), (ii) and (iii), the failure to so comply would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. The term **"** Environmental Laws **"** means all federal, state, local or foreign laws relating to pollution or protection of human health or the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata), including, without limitation, laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, **"** Hazardous Materials **"**) into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations issued, entered, promulgated or approved thereunder.

8.14 Tax Status . MHA (a) has made or filed all federal and state income and all other tax returns, reports and declarations required by any jurisdiction to which it is subject, (b) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations, except those being contested in good faith and (c) has set aside on its books provision reasonably adequate for the payment of all taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of MHA know of no basis for any such claim.

8.15 Proprietary Rights . MHA owns or possesses adequate and enforceable rights to use all patents, patent applications, trademarks, trade names, corporate names, copyrights, trade secrets, licenses, inventions, formulations, technology and know-how and other intangible property used in the conduct of its business (the " Proprietary Rights "). MHA has not received any notice of, and there are no facts known to MHA that reasonably indicate the existence of (a) any infringement or misappropriation by any third party of any of the Proprietary Rights or (b) any claim by a third party contesting the validity of any of the Proprietary Rights. MHA has not received any notice of any infringement, misappropriation or violation by MHA or any of its employees of any Proprietary Rights of third parties.

8.16 Insurance . MHA is insured by insurers of recognized financial responsibility against such losses and risks, including, without limitation, products liability, and in such amounts as are prudent and customary in the businesses in which MHA is engaged, including, but not limited to, directors and officers insurance coverage at least equal to $5.0 million. To the best knowledge of MHA, such insurance contracts and policies are accurate and complete. MHA has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business on terms consistent with market for MHA's line of business.

8.17 Private Placement . Assuming the accuracy of Nordic's representations and warranties set forth in Section 7, no registration under the Securities Act is required for the offer and sale of the Securities and the Conversion Shares by MHA to Nordic as contemplated hereby. The issuance and sale of the Securities and the Conversion Shares hereunder does not contravene the rules and regulations of the Trading Market.

8.18 Registration Rights . Other than Nordic, no Person has any right to cause MHA to effect the registration under the Securities Act of any securities of MHA.

8.19 Solvency and Indebtedness . Based on the financial condition of MHA, (a) MHA's fair saleable value of its assets exceeds the amount that will be required to be paid on or in respect of MHA's existing debts and other liabilities (including known contingent liabilities) as they mature; (b) MHA's assets do not constitute unreasonably small capital to carry on its business for the current fiscal year as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by MHA, and projected capital requirements and capital availability thereof; and (c) the current cash flow of MHA, together with the proceeds MHA would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its debt when such amounts are required to be paid. MHA does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). MHA has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. MHA is being operated pursuant to a budget which has been provided to, and reviewed by Nordic. The SEC Reports set forth as of the dates thereof all outstanding secured and unsecured Indebtedness of MHA, or for which MHA has commitments. For the purposes of this Agreement, "I ndebtedness " shall mean (a) any liabilities for borrowed money or amounts owed in excess of $50,000 (other than trade accounts payable incurred in the ordinary course of business), (b) all guaranties, endorsements and other contingent obligations in respect of Indebtedness of others, whether or not the same are or should be reflected in MHA's balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (c) the present value of any lease payments in excess of $50,000 due under leases required to be capitalized in accordance with GAAP. MHA is not in default with respect to any Indebtedness.

8.20 Clinical Studies. MHA has provided or will provide (i) all communications to the Food and Drug Administration (the " FDA ") of any adverse events with respect to any clinical or pre-clinical studies, tests or research that are described in the SEC Reports or the results of which are referred to in the SEC Reports, and (ii) any notices or other correspondence from the FDA or any other foreign, federal, state or local governmental or regulatory authority with respect to any clinical or pre-clinical studies, tests or research that are described in the SEC Reports or the results of which are referred to in the SEC Reports which require the termination, suspension, delay or modification of such studies, tests or research, otherwise require MHA to engage in any remedial activities with respect to such studies, test or research, or threaten to impose or actually impose any fines or other disciplinary actions, in the case of each of (i) and (ii) as such communications, notices or other correspondence relate to the Assets.

8.21 Disclosure . The representations and warranties made by MHA herein (as modified by the Disclosure Schedule) are true and correct and do not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made herein, in light of the circumstances under which they were made, not misleading.

8.22 Absence of Certain Changes . Since September 30, 2007, there has been no material adverse change in the business, operations, conditions (financial or otherwise), prospects, assets or results of operations of MHA.

8.23 Other Representations and Warranties . The representations and warranties of MHA in the Additional Agreements will be true and correct when made.

9. Other Agreements of the Parties.

9.1 Transfer Restrictions .

(a) The Securities and the Conversion Shares may only be disposed of in compliance with state and federal securities laws. In connection with any transfer of the Securities or the Conversion Shares other than pursuant to an effective registration statement or Rule 144, to MHA or to an affiliate of Nordic or in connection with a pledge as contemplated in Section 9.1(b), MHA may require the transferor thereof to provide to MHA an opinion of counsel selected by the transferor and reasonably acceptable to MHA, the form and substance of which opinion shall be reasonably satisfactory to MHA, to the effect that such transfer does not require registration of such transferred Securities or Conversion Shares under the Securities Act.

(b) Nordic agrees to the imprinting, so long as is required by this Section 9.1(b), of a legend on any of the Securities or Conversion Shares in the following form:

> THESE SHARES HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO MHA. THESE SHARES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT WITH A REGISTERED BROKER-DEALER OR OTHER LOAN WITH A FINANCIAL INSTITUTION THAT IS AN "ACCREDITED INVESTOR" AS DEFINED IN RULE 501(a) UNDER THE SECURITIES ACT.

MHA acknowledges and agrees that Nordic may from time to time pledge or grant a security interest in some or all of the Securities or Conversion Shares to a financial institution that is an "accredited investor" as defined in Rule 501(a) under the Securities Act and who agrees to be bound by the provisions of this Agreement and the Registration Rights Agreement and, if required under the terms of such arrangement, Nordic may transfer pledged or secured Securities or Conversion Shares to the pledgees or secured parties. So long as it complies in all respects with applicable state and federal securities laws, such a pledge or transfer would not be subject to approval of MHA and no legal opinion of legal counsel of the pledgee, secured party or pledgor shall be required in connection therewith. Further, no notice shall be required of such pledge. At Nordic's expense, MHA will execute and deliver such reasonable documentation as a pledgee or secured party of Securities or Conversion Shares may reasonably request in connection with a pledge or transfer of the Securities or Conversion Shares, including, if the Securities or Conversion Shares are subject to registration pursuant to the Registration Rights Agreement, the preparation and filing of any required prospectus supplement under Rule 424(b)(3) under the Securities Act or other applicable provision of the Securities Act to appropriately amend the list of Selling Stockholders thereunder.

(c) Certificates evidencing the Securities and the Conversion Shares shall not contain any legend (including the legend set forth in Section 9.1(b)), (i) following the resale of the Securities or Conversion Shares pursuant to an effective registration statement covering the resale of such security under the Securities Act, or (ii) following any sale of such Securities or Conversion Shares pursuant to Rule 144 (assuming the transferor is not an Affiliate of MHA), or (iii) if such Securities or Conversion Shares are eligible for sale under Rule 144 without volume restrictions, or (iv) if such legend is not required under applicable requirements of the Securities Act and the rules and regulations promulgated thereunder (including judicial interpretations and pronouncements issued by the staff of the SEC). MHA agrees that at such time as such legend is no longer required under this Section 9.1(c), it will, no later than three Trading Days following the delivery by Nordic to MHA or MHA's transfer agent of a certificate representing Securities or Conversion Shares, as the case may be, issued with a restrictive legend, deliver or cause to be delivered to Nordic a certificate representing such shares that is free from all restrictive and other legends. MHA may not make any notation on its records or give instructions to any transfer agent of MHA that enlarge the restrictions on transfer set forth in this Section. Certificates for the Securities or Conversion Shares subject to legend removal hereunder shall be transmitted by the transfer agent of MHA to Nordic by crediting the account of Nordic's prime broker with the Depository Trust Company System.

9.2 Furnishing of Information .

(a) As long as Nordic owns Securities or Conversion Shares, MHA covenants as follows: (i) MHA shall timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by MHA after the date hereof pursuant to the Exchange Act, and (ii) all such reports filed by MHA after the date hereof pursuant to the Exchange Act shall comply in all material respects with the requirements of the Exchange Act and the rules and regulations of the SEC promulgated thereunder, and none of such reports, when filed, shall contain any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(b) As long as Nordic owns Securities or Conversion Shares, if MHA is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to Nordic and make publicly available in accordance with Rule 144 such information as is required for Nordic to sell the Securities or Conversion Shares under Rule 144. MHA further covenants that it will take such further action as Nordic may reasonably request, all to the extent required from time to time to enable Nordic to sell Securities or Conversion Shares without registration under the Securities Act within the limitation of the exemptions provided by Rule 144.

9.3 Integration . MHA shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities or the Conversion Shares in a manner that would require the registration under the Securities Act of the sale of the Securities or the Conversion Shares to Nordic or that would be integrated with the offer or sale of the Securities or the Conversion Shares for purposes of the rules and regulations of any Trading Market such that it would require stockholder approval of the sale of the Securities or the Conversion Shares to Nordic unless stockholder approval is obtained before the closing of such subsequent transaction.

9.4 Confidentiality; Required Disclosure .

(a) Each party agrees, and will cause its affiliates, to keep confidential and not to publish (by press release, press interview, or otherwise) or otherwise divulge or use for its own benefit or for the benefit of any third party any information of a confidential or proprietary nature furnished to it by the other party, or the existence and terms of this Agreement or the Additional Agreements or the existence or results of the parties' collaboration hereunder or thereunder, without the prior written approval of the other party, except to those of such party's employees and representatives as may need to know such information for purposes of the transactions contemplated by the parties' agreements, and except as required by applicable law or by obligations pursuant to any listing agreement with or rules of any Trading Market. In the event of any such required disclosure, including the filings described in Section 9.4(b) below, the disclosing party will (i) provide the other party with written notice of the required disclosure at least 48 hours in advance of such disclosure, and (ii) limit such disclosure to the minimum required under the applicable law or obligations, whether through a request for confidential treatment or otherwise. The confidentiality obligation described above shall not apply to information of the other party which: was already known by the recipient prior to the time of its disclosure by the disclosing party to the recipient; is publicly available or later becomes publicly available through no fault of the recipient; or is disclosed to the recipient by a third party having no similar confidentiality obligation. This obligation shall terminate three years after execution of this Agreement.

(b) MHA shall (i) timely file with the SEC a Current Report on Form 8-K with respect to the transactions contemplated by this Agreement and the Additional Agreements, and (ii) make such other filings and notices in the manner and time required by the SEC and the Trading Market, provided, in the case of a filing or notice described in clause (i) or (ii) above, that the information contained in such filing or notice is limited to the information necessary in order for MHA to comply with the Exchange Act and the regulations promulgated thereunder or the other applicable legal or Trading Market obligations.

9.5 Indemnification of Nordic . Subject to the provisions of this Section 9.5, MHA will indemnify and hold Nordic and its directors, officers, stockholders, members, partners, employees and agents (each, a " Purchaser Party ") harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations and warranties, when made, or the covenants or agreements made by MHA in this Agreement and the Additional Agreements or (b) any action instituted against Nordic or its Affiliates, or in which Nordic becomes involved in any capacity, by any stockholder of MHA who is not an Affiliate of Nordic, with respect to any of the transactions contemplated by the Agreement or the Additional Agreements (unless such action is based upon a breach of Nordic's representations, warranties or covenants under the Agreement or the Additional Agreements or any agreements or understandings Nordic may have with any such stockholder or any violations by Nordic of state or federal securities laws or any conduct by Nordic which constitutes fraud, gross negligence, willful misconduct or malfeasance). If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify MHA in writing, and MHA shall have the right to assume the defense thereof with counsel of its own choosing. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Purchaser Party except to the extent that (a) the employment thereof has been specifically authorized by MHA in writing, (b) MHA has failed after a reasonable period of time to assume such defense and to employ counsel or (c) in such action there is, in the reasonable opinion of such separate counsel, a material conflict on any material issue between the position of MHA and the position of such Purchaser Party. MHA will not be liable to any Purchaser Party under this Agreement (i) for any settlement by a Purchaser Party effected without MHA's prior written consent, which shall not be unreasonably withheld or delayed; or (ii) to the extent, but only to the extent that a loss, claim, damage or liability is attributable to any Purchaser Party's breach of any of the representations, warranties, covenants or agreements made by Nordic in this Agreement or in Additional Agreements. MHA shall not approve the settlement of any claims against a Purchaser Party without the written consent of the Purchaser Party, unless such settlement holds such Purchaser Party harmless and releases the Purchaser Party from all claims.

9.7 Reservation of Common Stock . MHA shall maintain a reserve, free of preemptive rights, from its duly authorized shares of Common Stock for issuance pursuant to the Agreement in such amount as may be required to fulfill its obligations under the Agreement in full, including the issuance of Conversion Shares.

9.8 Formation of Newco and General Partner . Prior to the Closing, MHA and Nordic shall cooperate in entering into such agreements and filing such certificates as are necessary to properly form Newco as a Danish limited partnership and the General Partner as a Danish private limited company, including, without limitation, by the filing of the Articles of Association of Newco, and the Articles of Association and Memorandum of Association of the General Partner, all in the form attached to the Partnership Agreement, with the Danish Commerce and Companies Agency.

10. Miscellaneous.

10.1 Termination . This Agreement may be terminated by Nordic by written notice to MHA, if the Closing has not been consummated on or before February 18, 2008.

10.2 Fees and Expenses . All fees and expenses incurred by MHA in connection with the transactions contemplated by this Agreement shall be borne by MHA. All fees and expenses incurred by Nordic in connection with the transactions contemplated by this Agreement shall be borne by MHA to the extent that such fees and expenses to do not exceed $125,000, and by Nordic thereafter. Nordic acknowledges that it has received $60,000 from MHA as an advance on fees and expenses. Nordic agrees to submit evidence of additional fees and expenses to MHA in order to request additional advances, and MHA agrees to make such advances for up to an additional $65,000. Nordic is under no obligation to return any portion of any advance made unless the Closing does not occur, in which case Nordic agrees to return to MHA the portion of advances made, if any, in excess of Nordic's actual fees and expenses.

10.3 Entire Agreement . The Agreement and the Additional Agreements, together with the exhibits and schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

10.4 Notices . Any notice, demand, offer or other written instrument (" Notice ") required or permitted to be given shall be in writing signed by the party giving such Notice and shall be hand delivered or sent, postage prepaid, by certified or registered mail, return receipt requested, or by overnight delivery such as Federal Express, addressed as follows:

If to MHA:

Manhattan Pharmaceuticals, Inc.
810 Seventh Avenue, 4 th Floor
New York, NY 10019
Fax: (212) 582-3957
Attn: Chief Financial Officer
Email: mgmcguinness@manhattanpharma.com

with a copy to:

Lowenstein Sandler PC
65 Livingston Avenue
Roseland, New Jersey 07068
Telephone: (973) 597-2500
Fax: (973) 597-2400
Attn: Anthony O. Pergola
Email: apergola@lowenstein.com

If to Nordic:

Nordic Biotech Advisors
Østergade 5, 3rd floor
DK-1100 Copenhagen K
Denmark
Attn: Florian Schönharting
Fax: (978) 448-3145
Email: fs@nordicbiotech.com
With a copy to: John M. Barberich
Email: jmb@nordicbiotech.com

with a copy to:

Nutter, McClennen & Fish LLP
World Trade Center West
155 Seaport Boulevard
Boston, MA 02210
Fax: (617) 310-9000
Attn: James E. Dawson, Esq.
Email: jdawson@nutter.com

Any party shall have the right to change the place to which such Notice shall be sent or delivered by similar notice sent in like manner to all other parties hereto.

10.5 Amendments; Waivers . No provision of this Agreement may be waived or amended except in a written instrument signed, in the case of an amendment, by MHA and Nordic or, in the case of a waiver, by the party against whom enforcement of any such waiver is sought. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of either party to exercise any right hereunder in any manner impair the exercise of any such right.

10.6 Headings . The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party.

10.7 Successors and Assigns . This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. MHA may not assign this Agreement or any rights or obligations hereunder without the prior written consent of Nordic.

10.8 No Third-Party Beneficiaries . This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 9.6.

10.9 Governing Law . All questions concerning the construction, validity, enforcement and interpretation of this Agreement and the Additional Agreements shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof, except to the extent that the application of the General Corporation Law of the State of Delaware is mandatorily applicable. If either party shall commence an action or proceeding to enforce any provisions of the Transaction Documents, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding. Each party hereby irrevocably submits to the exclusive jurisdiction of the federal and state courts sitting in the state of New York in any action or proceeding arising out of or relating to this Agreement, the Additional Agreements or the transactions contemplated hereby or thereby. Each party hereby irrevocably agrees, on behalf of itself and on behalf of such party's successors and permitted assigns, that all claims in respect of such action or proceeding shall be heard and determined in any such court and irrevocably waives any objection such person may now or hereafter have as to the venue of any such suit, action or proceeding brought in such a court or that such court is an inconvenient forum.

10.10 Survival . The representations, warranties, agreements and covenants contained herein shall survive the Closing and the delivery of the Securities and Conversion Shares.

10.11 Execution . This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile signature page were an original thereof.

10.12 Severability . If any provision of this Agreement is held to be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Agreement shall not in any way be affected or impaired thereby and the parties will attempt to agree upon a valid and enforceable provision that is a reasonable substitute therefore, and upon so agreeing, shall incorporate such substitute provision in this Agreement.

10.13 Remedies . In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of Nordic and MHA will be entitled to specific performance under this Agreement and the Additional Agreements. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations described in the foregoing sentence and hereby agrees to waive in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

10.14 Payment Set Aside . To the extent that MHA makes a payment or payments to Nordic pursuant to this Agreement or the Additional Agreements or Nordic enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to MHA, a trustee, receiver or any other person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement under seal as of the day and year first above written.

MHA:

MANHATTAN PHARMACEUTICALS, INC.

By: /s/ Michael McGuinness
Name:
Title: CFO

NORDIC:

NORDIC BIOTECH VENTURE FUND II K/S

By: /s/ Florian Schonharting
Name:
Title: Partner

By: /s/ Christian Hansen
Name:
Title: Partner

Address: Østergade 5, 3rd floor
DK-1100 Copenhagen K
Denmark

DISCLOSURE SCHEDULES
DATE JANUARY 31, 2008
TO JOINT VENTURE AGREEMENT

Schedule 8.6 (Litigation)

Swiss Pharma Contract LTD ("Swiss Pharma"), a clinical site that MHA used in one of its obesity trials, gave notice to MHA that Swiss Pharma believes it is entitled to receive an additional payment of $322,776 for services in connection with that clinical trial. While the contract between MHA and Swiss Pharma provides for additional payments if certain conditions are met, Swiss Parma has not specified which conditions they believe have been achieved and MHA does not believe that Swiss Pharma is entitled to additional payments and has not accrued any of these costs as of September 30, 2007. The contract between MHA and Swiss Pharma provides for arbitration in the event of a dispute, such as this claim for an additional payment. Swiss Pharma has filed a demand for arbitration. As MHA does not believe that Swiss Pharma is entitled to additional payments, it intends to defend its position in arbitration.

Schedule 8.22 (Absence of Certain Changes)

MHA's cash balance as of January 31, 2008, is approximately $250,000.

Exhibit 10.20

Execution Version

AMENDMENT TO JOINT VENTURE AGREEMENT

THIS AMENDMENT TO JOINT VENTURE AGREEMENT (this "Amendment") is entered into as of February 18, 2008 by and between Manhattan Pharmaceuticals, Inc., a Delaware corporation ("MHA") and Nordic Biotech Venture Fund II K/S, a Danish limited liability partnership ("Nordic").

WITNESSETH:

WHEREAS, MHA and Nordic have entered into a Joint Venture Agreement dated as of January 31, 2008 (as amended from time to time, the "Joint Venture Agreement") by which, among other things, Nordic agrees to contribute capital to a newly formed limited partnership and MHA agrees to assign and contribute certain assets to the newly formed limited partnership (capitalized terms not otherwise defined herein shall have the meanings assigned to them in the Joint Venture Agreement).

WHEREAS, the closing of the transactions contemplated by the Joint Venture Agreement was scheduled to occur on or before February 18, 2008;

WHEREAS, MHA has requested a waiver of the closing condition set forth in Section 2.2(b)(xi) of the Joint Venture Agreement with respect to the requirements of Section 710(b) of the Amex Company Guide of the American Stock Exchange;

WHEREAS, Nordic has agreed to waive such closing condition and amend the date by which the closing must occur to February 25, 2008, solely upon the terms and conditions set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

1. Amendments.

(a) Section 2.1 of the Joint Venture Agreement is hereby amended by deleting the phrase "February 18, 2008" and replacing it with "February 25, 2008".

(b) Section 10.1 of the Joint Venture Agreement is hereby amended by deleting the phrase "February 18, 2008" and replacing it with "February 25, 2008".

(c) Section 1 of the Joint Venture Agreement is hereby amended by deleting the definition of the terms "Call Event" and "Trading Market" and replacing them in their entirety with the following:

> "Call Event" means the occurrence of thirty consecutive business days on which the closing sale price of the Common Stock as reported on the Trading Market exceeds ten times the Transaction Price (the "Threshold Price").

"Trading Market" means whichever of the New York Stock Exchange, the American Stock Exchange, the Nasdaq Global Market, the Nasdaq Global Select Market, the Nasdaq Capital Market, the OTC Bulletin Board or other recognized exchange or market on which the Common Stock is listed or quoted on the date in question.

(d) Section 4.3 of the Joint Venture Agreement is hereby amended by deleting the term "$2,000,000" and replacing it with the term "$1,500,000".

(e) Section 10.2 of the Joint Venture Agreement is hereby deleted in its entirety and replaced with the following:

"10.2 Fees and Expenses. All fees and expenses incurred by MHA in connection with the transactions contemplated by this Agreement shall be borne by MHA. All fees and expenses incurred by Nordic in connection with the transactions contemplated by this Agreement shall be borne by MHA to the extent that such fees and expenses to do not exceed $140,000, and by Nordic thereafter. Nordic acknowledges that it has received $60,000 from MHA as an advance on fees and expenses. Nordic agrees to submit evidence of additional fees and expenses to MHA in order to request additional advances, and MHA agrees to make such advances for up to an additional $80,000. Nordic is under no obligation to return any portion of any advance made unless the Closing does not occur, in which case Nordic agrees to return to MHA the portion of advances made, if any, in excess of Nordic's actual fees and expenses."

(f) Section 13.1 of Exhibit B to the Joint Venture Agreement is hereby amended by deleting the phrase "5% of Net Sales" and replacing it with the following: "6% of Net Sales".

(g) Section 13.3 of Exhibit B to the Joint Venture Agreement is hereby amended by deleting the second sentence of such section and replacing it with the following: "For the avoidance of doubt, if Nordic's percentage ownership of Partnership Shares decreases from 50% to 20%, the Nordic Royalty shall be reduced from 6% to 2.4% of Net Sales."

(h) The second sentence of Section 8.17 of the Joint Venture Agreement is hereby deleted in its entirety and replaced with the following: "The issuance and sale of the Securities and the Conversion Shares hereunder will not result in the imposition of any fine or monetary penalty against the Company by the Trading Market."

2. **Waiver**. Nordic hereby waives the condition to closing set forth in Section 2.2(b)(xi) of the Joint Venture Agreement.

3. **Representations and Warranties**. MHA represents and warrants to Nordic that this Amendment has been duly executed and delivered by MHA and constitutes a legal, valid and binding obligation of MHA enforceable against MHA in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules

of law governing specific performance, injunctive relief or other equitable remedies, and to limitations of public policy. Nordic represents and warrants to MHA that this Amendment has been duly executed and delivered by Nordic and constitutes a legal, valid and binding obligation of Nordic enforceable against Nordic in accordance with its terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies, and to limitations of public policy.

4. **Ratification**. Except as hereby amended, the Joint Venture Agreement and each provision thereof are hereby ratified and confirmed in every respect and shall continue in full force and effect.

5. **Conditions Precedent**. The agreements set forth in this Amendment are conditional and this Amendment shall not be effective until receipt by each party of a fully-executed counterpart of this Amendment (which may be a facsimile or .pdf copy thereof).

6. **Miscellaneous.**

(a) Entire Agreement. This Amendment and the Joint Venture Agreement contains the entire understanding of the parties hereto and supercedes all prior or contemporaneous negotiations, promises, covenants, agreements and representations of every nature whatsoever with respect to the matters referred to in this Amendment and the Joint Venture Agreement, all of which have become merged and finally integrated into the Joint Venture Agreement.

(b) Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party.

(c) Successors and Assigns. This Amendment shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns.

(d) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Amendment shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof, except to the extent that the application of the General Corporation Law of the State of Delaware is mandatorily applicable. If either party shall commence an action or proceeding to enforce any provision of this Amendment, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding. Each party hereby irrevocably submits to the exclusive jurisdiction of the federal and state courts sitting in the state of New York in any action or proceeding arising out of or relating to this Amendment. Each party hereby irrevocably agrees, on behalf of itself and on behalf of such party's successors and permitted assigns, that all claims in respect of such action or proceeding shall be heard and determined in any such court and irrevocably waives any objection such person may now or hereafter have as to the venue of any such suit, action or proceeding brought in such a court or that such court is an inconvenient forum.

(f) Counterparts. This Amendment may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile signature page were an original thereof.

(g) Severability. If any provision of this Amendment is held to be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Amendment shall not in any way be affected or impaired thereby and the parties will attempt to agree upon a valid and enforceable provision that is a reasonable substitute therefore, and upon so agreeing, shall incorporate such substitute provision in this Amendment.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment under seal as of the day and year first above written.

MHA:

MANHATTAN PHARMACEUTICALS, INC.

By: M. McG
Name: Michael McGuinness
Title: CFO

NORDIC:

NORDIC BIOTECH VENTURE FUND II K/S

By: s/Florian Schonharting
Name:
Title: Partner

By: s/Christian Hansen
Name:
Title: Partner

1709211.2

IN WITNESS WHEREOF, the parties hereto have executed this Amendment under seal as of the day and year first above written.

MHA:

MANHATTAN PHARMACEUTICALS, INC.

By: _____
Name: _____
Title: _____

NORDIC:

NORDIC BIOTECH VENTURE FUND II K/S

By: _____
Name: C. Hansen
Title: Partner

By: _____
Name: _____
Title: _____

1709211.2

IN WITNESS WHEREOF, the parties hereto have executed this Amendment under seal as of the day and year first above written.

MHA:

MANHATTAN PHARMACEUTICALS, INC.

By: _____
Name: _____
Title: _____

NORDIC:

NORDIC BIOTECH VENTURE FUND II K/S

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

1709211.4

EXHIBIT A

Exhibit 10.21

ASSIGNMENT AND CONTRIBUTION AGREEMENT

THIS ASSIGNMENT AND CONTRIBUTION AGREEMENT (this " **Agreement** ") is made and entered into effective as of February 25, 2008, by and between Manhattan Pharmaceuticals, Inc., a Delaware corporation (" **MHA** "), Hedrin Pharmaceuticals K/S , a Danish limited liability partnership (" **Newco** ") and, for the purposes of Article 6 only, Nordic Biotech Venture Fund II K/S, a Danish limited liability partnership (" **Nordic** ").

WHEREAS, MHA and Nordic have entered into a Joint Venture Agreement dated as of January 31, 2008 (the " **Joint Venture Agreement** ") pursuant to which Newco has been newly formed and capitalized by Nordic for the purpose of holding and commercializing the Assets (as defined below); and

WHEREAS , subject to and in accordance with the terms and conditions of this Agreement: (i) MHA desires to assign the Assets and transfer the Assumed Liabilities (as defined below) to Newco, and Newco desires to acquire the Assets and assume the Assumed Liabilities from MHA; and (ii) as consideration for the assignment of the Assets, in addition to the assumption of the Assumed Liabilities, Newco desires to pay to MHA, and MHA desires to receive, the Cash Payments (as defined below) and the Equity Payments (as defined below).

NOW, THEREFORE, in consideration of the premises and the representations, warranties and covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. DEFINITIONS

In this Agreement, capitalized terms not otherwise defined herein shall have the meanings assigned to them in the Joint Venture Agreement, and the following terms have the following meanings, unless otherwise defined herein:

" **Assets** " means all right, title and interest of MHA in, to and under (i) the Hedrin Agreements, (ii) all regulatory applications, approvals, worldwide product registrations and associated materials relating to the Licensed Products (as defined in the Hedrin License), (iii) all contracts (other than the Hedrin Agreements) solely relating to the Licensed Products, as listed on Appendix A (the " **Other Assigned Contracts** "), (iv) all promotional and informational materials in MHA's possession or under its control used in connection with the Licensed Products, (v) all Licensed Products held by or on behalf of MHA in inventory or as samples, including any Clinical Supply (as defined in the Supply Agreement), (vi) the Scientific Data, including any rights of access that MHA has to the Scientific Data, and (vii) copies of all other files, records, books, documents, data, plans and proposals of MHA relating principally to the Licensed Products, whether in written, electronic, visual or other form, redacted as necessary to delete all files, records, books, documents, data, plans and proposals respecting or including other products of MHA and/or aspects of its business.

" **Assumed Liabilities** " means all obligations and liabilities of MHA under the Hedrin Agreements and the Other Assigned Contracts arising on or after the Closing Date.

" **Hedrin Agreements** " means the agreements identified as such on Appendix A attached hereto.

" **Hedrin License** " means that certain Exclusive License Agreement for "Hedrin" among Thornton & Ross, Ltd., Kerris, S.A. and Manhattan Pharmaceuticals, Inc., dated June 26, 2007.

" **Hedrin Patent Rights** " means: (i) U.S. Patent Application Serial No. 11/705,389 and (ii) Canadian Patent Application No. 2,381,106.

" **Hedrin Product** " shall mean the "Products," as defined in that certain Supply Agreement between Thornton & Ross, Ltd. and Manhattan Pharmaceuticals, Inc., dated June 26, 2007, for use by humans in the treatment of infestations of head lice, body lice, pubic lice and scabies mites.

" **Liens** " means all liens, claims and encumbrances of any kind or nature, including, without limitation, sublicenses.

" **Permitted Liens** " means the Liens listed on Appendix B attached hereto.

" **Scientific Data** " means all available laboratory and all clinical data, including raw data and reports created by MHA or any third party on behalf of MHA or in the possession of MHA, in connection with the Licensed Products (as defined in the Hedrin License).

" **Supply Agreement** " means that certain Supply Agreement between Thornton & Ross, Ltd. and Manhattan Pharmaceuticals, Inc., dated June 26, 2007.

2. CONTRIBUTION OF ASSETS; ASSUMPTION OF ASSUMED LIABILITIES.

2.1 Contribution of Assets.

In consideration of and subject to Newco's payment of the Cash Payments and the Equity Payments and assumption of the Assumed Liabilities, MHA hereby transfers, sells, conveys, assigns, and delivers to Newco all of its right, title and interest in and to the Assets, free and clear of any Liens, other than Permitted Liens. Upon Newco's reasonable request from time to time, MHA shall execute and deliver to Newco such bills of sale, endorsements, assignments and other good and sufficient instruments of assignment, transfer and conveyance, in form and substance reasonably satisfactory to Newco, as shall be necessary to vest in Newco all of MHA's right, title and interest in and to the Assets.

2.2 Assumption of Assumed Liabilities .

MHA hereby transfers to Newco and Newco hereby assumes, and will satisfy and perform when due, the Assumed Liabilities.

3. REPRESENTATIONS AND WARRANTIES OF MHA.

MHA hereby represents and warrants to Newco as of the Closing Date as follows:

3.1 Organization, Authority, Etc.

MHA is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. MHA has the requisite corporate power and authority to execute and deliver this Agreement and to consummate the transactions contemplated hereby. The execution and delivery of this Agreement by MHA and the consummation by MHA of the transactions contemplated hereby have been duly authorized by all necessary corporate action on the part of MHA. This Agreement at the time delivered will have been duly executed and delivered by MHA and constitute a legal, valid and binding obligation of MHA enforceable against MHA in accordance with its terms, except as the same may be limited by bankruptcy, insolvency, moratorium, reorganization or other laws of general applicability relating to or affecting the enforcement of creditors' rights and general principles of equity.

3.2 No Conflict.

The execution, delivery and performance by MHA of this Agreement and the consummation by MHA of the transactions contemplated hereby will not require any notice to, filing with, or the consent, approval or authorization of, any third party. Neither the execution and delivery by MHA of this Agreement nor the consummation of the transactions contemplated hereby by MHA will: (i) require the consent, license, permit, waiver, approval, authorization or other action of, by or with respect to, or registration, declaration or filing with, any governmental authority or any other person; (ii) constitute a default (with or without notice or lapse of time or both) under, violate or conflict with, or give rise to a right of termination, cancellation or acceleration or to a loss of a material benefit under, any judgment, order, writ, decree, judgment, license, instrument or agreement to which MHA is a party or by which MHA is bound; or (iii) constitute a violation by MHA of any law, regulation, order or other governmental requirement applicable to MHA.

3.3 Title .

Immediately prior to giving effect to the transactions contemplated hereby, MHA is the sole owner of, and has good and marketable title to, the Assets, free and clear of any Liens other than Permitted Liens.

3.4 Hedrin Agreements .

Neither MHA, nor to MHA's knowledge any other party to any of the Hedrin Agreements, is in breach of any of the Hedrin Agreements, and no condition or set of facts exists which, with notice, lapse of time or both would constitute a default thereunder on the part of MHA or, to MHA's knowledge, on the part of any other party thereto.

3.5 Intellectual Property .

Except as set forth on Schedule 3.5 attached hereto: (i) except for prosecution of the patent applications included in the Hedrin Patent Rights in the ordinary course, there are no interferences or other adversarial proceedings pending, or to MHA's knowledge threatened, with regard to any of the Hedrin Patent Rights; and (ii) to the knowledge of MHA, the marketing and sale of the Hedrin Product in the United States and Canada for use by humans in the treatment of infestations of head lice, body lice, pubic lice and scabies mites would not constitute an infringement of any United States or Canadian patent validly issued and existing as of the Closing Date or a misappropriation of any trade secret rights of any third party. MHA has made available to Newco (or Nordic) all available Scientific Data.

3.6 Assets.

Except as set forth on Schedule 3.6 attached hereto, the Assets constitute all of the assets in MHA's possession or control necessary to develop and commercialize the Licensed Products.

3.7 Royalty Term.

The Royalty Term (as defined in the Hedrin License) has not commenced.

3.8 Durminster Agreement.

MHA has not received any (i) request to consent to an amendment or termination of the Durminster Agreement (as defined in the Hedrin License) or (ii) notice that any party is in default of the Durminster Agreement.

3.9 Milestone Payments

The Milestone Payment (as defined in the Hedrin License) set forth in Section 6.6.1 of the Hedrin License has been fully paid and no further obligation exists thereunder. The conditions for the Milestone Payments set forth in Sections 6.6.2 through 6.6.7 of the Hedrin License have not yet been satisfied.

3.10 Agency Communications

MHA has provided Newco (or Nordic) with all communications (written, electronic and oral) received by or in the possession of MHA from the U.S. Food and Drug Administration and any similar state, local, federal of foreign Competent Authority (as defined in the Hedrin License) regarding the approvability or approval of any Licensed Product, and no such communication indicates that the U.S. Food and Drug Administration would not treat the Licensed Product as a medical device under the Federal Food, Drug and Cosmetic Act.

3.11 No Other Representations or Warranties.

Except for the representations and warranties of MHA expressly set forth in this Article 3 , MHA makes no express or implied representation or warranty in connection with the transactions contemplated by this Agreement.

4. REPRESENTATIONS AND WARRANTIES OF NEWCO.

Newco hereby represents and warrants to MHA as of the Closing Date as follows:

4.1 Organization, Authority, Etc.

Newco is a Danish limited liability partnership duly organized, validly existing and in good standing under the laws of Denmark. Newco has the requisite partnership power and authority to execute and deliver this Agreement and to consummate the transactions contemplated hereby. The execution and delivery of this Agreement by Newco and the consummation by Newco of the transactions contemplated hereby have been duly authorized by all necessary partnership action on the part of Newco. This Agreement at the time delivered will have been duly executed and delivered by Newco and constitute a legal, valid and binding obligation of Newco enforceable against Newco in accordance with its terms, except as the same may be limited by bankruptcy, insolvency, moratorium, reorganization or other laws of general applicability relating to or affecting the enforcement of creditors' rights and general principles of equity.

4.2 No Conflict.

The execution, delivery and performance by Newco of this Agreement and the consummation by Newco of the transactions contemplated hereby will not require any notice to, filing with, or the consent, approval or authorization of, any third party. Neither the execution and delivery by Newco of this Agreement nor the consummation of the transactions contemplated hereby by Newco will: (i) require the consent, license, permit, waiver, approval, authorization or other action of, by or with respect to, or registration, declaration or filing with, any governmental authority or any other person; (ii) constitute a default (with or without notice or lapse of time or both) under, violate or conflict with, or give rise to a right of termination, cancellation or acceleration or to a loss of a material benefit under, any judgment, order, writ, decree, judgment, license, instrument or agreement to which Newco is a party or by which Newco is bound; or (iii) constitute a violation by Newco of any law, regulation, order or other governmental requirement applicable to Newco.

4.3 No Other Representations or Warranties .

Except for the representations and warranties of Newco expressly set forth in this Article 4 and in Section 5.2 below, Newco makes no express or implied representation or warranty in connection with the transactions contemplated by this Agreement.

5. CONSIDERATION.

5.1 Cash Payments and Equity Issuances .

(a) In consideration of the assignment of the Assets made to Newco in this Agreement, in addition to the assumption of the Assumed Liabilities by Newco pursuant to Section 2.2 hereof, Newco shall:

(i) upon the execution and delivery of this Agreement: (A) pay to MHA US$2,000,000.00 in cash (the " **Initial Cash Payment** ") and (B) issue to MHA, and deliver a certificate representing, 500 Partnership Shares of Newco (as defined in the Limited Partnership Agreement of Newco dated as of the date hereof (the " **Partnership Agreement** ")) evidencing the ownership thereof to MHA (the " **Initial Equity Issuance** "); and

(ii) upon the achievement of the Payment Milestone (as defined below): (A) pay to MHA an additional US$1,500,000.00 in cash (the " **Second Cash Payment** " and, together with the Initial Cash Payment, the " **Cash Payments** ") and (B) if necessary to maintain MHA's 50% ownership of outstanding Partnership Shares, issue to MHA, and deliver a certificate representing, a number of additional Partnership Shares of Newco that will constitute, together with the Initial Equity Issuance, 50% of all outstanding Partnership Shares (the " **Second Equity Issuance** " and, together with the Initial Equity Issuance, the " **Equity Issuances** ").

(b) All Cash Payments made by Newco hereunder shall be made by wire transfer, in US dollars, to an account specified in writing by MHA.

(c) Upon the Initial Equity Issuance, MHA shall own 50% of the outstanding Partnership Shares of Newco. Upon the Second Equity Issuance, MHA shall own 50% of the outstanding Partnership Shares of Newco (after giving effect to the issuance of additional Partnership Shares, if any, to Nordic pursuant to the Partnership Agreement).

5.2 Certain Representations and Warranties .

Newco hereby (with respect to clauses (a), (c) and (d) below) and at the time of the Second Equity Issuance (with respect to clauses (b) through (d) below) represents and warrants to MHA as follows:

(a) The authorized capital of Newco, immediately after the Initial Equity Issuance, consists of 2,000 Partnership Shares, 1,000 of which are issued and outstanding, 500 of which are owned, beneficially and of record, by Nordic and 500 of which are owned, beneficially and of record, by MHA.

(b) The authorized capital of Newco, immediately after the Second Equity Issuance, if any, consists of 2,000 Partnership Shares, 1,000 of which are owned, beneficially and of record, by Nordic, and 1,000 of which are owned, beneficially and of record by MHA.

(c) All of the outstanding Partnership Shares of Newco have been duly authorized, are fully paid and nonassessable and were issued in compliance with all applicable Danish laws. Newco holds no Partnership Shares in its treasury.

(d) Except for (i) the Partnership Shares referred to in clauses (a) and (b) of this Section 5.2 , (ii) the obligation to issue Partnership Shares to MHA pursuant to this Article 5 , and (iii) the Partnership Agreement and the Joint Venture Agreement, Newco has no class or series of Partnership Shares authorized or outstanding and there are no outstanding options, warrants, rights (including conversion or preemptive rights and rights of first refusal or similar rights) or agreements, oral or in writing, to purchase or acquire from Newco any equity or debt security, or any security convertible into or exchangeable for an equity or debt security.

5.3 Definition of Payment Milestone .

For purposes of this Agreement, the term " **Payment Milestone** " shall mean a final determination from the U.S. Food and Drug Administration received prior to September 30, 2008 that the Licensed Products will be regulated as a medical device.

6. INDEMNIFICATION

6.1 Indemnification by MHA.

MHA will indemnify, defend and hold harmless Newco, Nordic and each of their respective officers, directors, employees and agents (each, a " Newco Indemnitee ") from and against any and all losses, costs, damages, judgments, settlements, interest, taxes, fees or expenses (including all reasonable attorneys' fees, experts' or consultants' fees, expenses and costs) (collectively, " **Losses** ") that may be incurred or paid by any of the Newco Indemnitees to the extent arising out of or resulting from: (i) MHA's breach of any representation, warranty, covenant or other provision contained in this Agreement or (ii) any all obligations and liabilities of MHA under the Hedrin Agreements arising prior to the Closing Date.

6.2 Indemnification by Newco.

Newco will indemnify, defend and hold harmless MHA and its officers, directors, employees and agents (each, a " MHA Indemnitee ") from and against any Losses that may be incurred or paid by any of the MHA Indemnitees to the extent arising out of or resulting from: (i) Newco's breach of any representation, warranty, covenant or other provision contained in this Agreement or (ii) the Assumed Liabilities.

6.3 Indemnity Procedures.

If any claim or action is asserted that would entitle a MHA Indemnitee or Newco Indemnitee to indemnification pursuant to either of the foregoing Section 6.1 or Section 6.2 (a " Proceeding "), the Party who seeks indemnification will give written notice thereof to the Party from whom indemnification is sought (the " Indemnitor ") promptly (and in any event within fifteen (15) calendar days after the service of the citation or summons); provided , however , that the failure of the Party seeking indemnification to give timely notice hereunder will not affect rights to indemnification hereunder, except to the extent that Indemnitor demonstrates actual prejudice caused by such failure. Indemnitor may elect to direct the defense or settlement of any such Proceeding by giving written notice to the Party seeking indemnification, which election will be effective immediately upon receipt by the Party seeking indemnification of such written notice of election. The Indemnitor will have the right to employ counsel reasonably acceptable to the Party seeking indemnification to defend any such Proceeding, or to compromise, settle or otherwise dispose of the same, if the Indemnitor deems it advisable to do so, all at the expense of the Indemnitor; provided that the Indemnitor will not settle, or consent to any entry of judgment in, any Proceeding without obtaining either: (i) an unconditional release of the Party seeking indemnification (and its Affiliates and each of their respective officers, directors, employees and agents) from all liability with respect to all claims underlying such Proceeding; or (ii) the prior written consent of the Party seeking indemnification. A Party seeking indemnification will not settle, or consent to any entry of judgment, in any Proceeding without obtaining the prior written consent of the Indemnitor. The Parties will fully cooperate with each other in any such Proceeding and will make available to each other any books or records useful for the defense of any such Proceeding.

6.4 Indemnification as Sole Remedy.

Other than for specific performance and claims of common law fraud, the indemnification provided in this Article 6 , subject to the limitations set forth herein, shall be the exclusive remedy available to MHA, Newco and Nordic, or any of their respective affiliates, arising out of or relating to this Agreement, the Assets or the Assumed Liabilities, and are in lieu of any and all other rights and remedies which MHA, Newco or Nordic may have under this Agreement or otherwise for monetary relief in connection with any of the foregoing.

7. GENERAL PROVISIONS.

7.1 Governing Law; Jurisdiction; Venue .

T his Agreement, and any disputes arising directly or indirectly from this Agreement, shall be governed by and construed and enforced in accordance with the laws of the state of New York, without regard to conflict-of-laws rules. The parties hereto hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the state courts located in the Borough of Manhattan in the State of New York (the " **NY Courts** "), and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the NY Courts for purposes of any action or proceeding arising out of or in connection with this Agreement, (iii) waive any objection to the laying of venue of any such action or proceeding in the NY Courts, and (iv) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the NY Courts has been brought in an improper or inconvenient forum.

7.2 Notices .

All notices, claims, demands and other communications hereunder shall be in writing and shall be deemed given if delivered personally or by telecopier, one business day after being sent by major overnight courier, or four business days after being mailed by registered or certified mail (postage prepaid, return receipt requested) to each party at its respective address set forth below (or at such other address as any party hereto shall hereafter specify by notice in writing to the other parties hereto).

Contact Information for Newco:
c/o Nordic Biotech Advisors
Østergade 5, 3rd floor
DK-1100 Copenhagen K
Denmark
Fax +45 70 20 12 64
E-mail: fs@nordic-biotech.com
Attn.: Florian Schönharting

Contact Information for MHA:
Manhattan Pharmaceuticals, Inc.
810 Seventh Avenue, 4 th Floor
New York, NY 10019
Fax: (212) 582-3957
Attn: Chief Financial Officer
Email: mgmcguinness@manhattanpharma.com

7.3 Entire Agreement .

This Agreement constitutes the entire agreement of the parties hereto with respect to the transactions contemplated hereby and supersedes all other prior agreements and understandings, both written and oral, among the parties or any of them, with respect to the subject matter hereof.

7.4 Binding Effect; Assignment .

All the terms, provisions, covenants and conditions of this Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective heirs, executors, administrators, representatives, successors and permitted assigns. This Agreement and the rights and obligations of the parties hereto shall not be assigned or delegated by any party hereto without the prior written consent of the other parties hereto.

7.5 Amendment; Waiver .

This Agreement may be amended, modified, superseded or canceled, and any of the terms, provisions, representations, warranties, covenants or conditions hereof may be waived, only by a written instrument executed by all parties hereto, or, in the case of a waiver, by the party waiving compliance. The failure of any party at any time or times to require performance of any provision hereof shall in no manner affect the right to enforce the same. No waiver by any party of any condition contained in this Agreement, or of the breach of any term, provisions, representation, warranty or covenant contained in this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach, or as a waiver of any other condition or of the breach of any other term, provision, representation, warranty or covenant.

7.6 Execution and Delivery; Counterparts .

A facsimile, telecopy or other reproduction of this Agreement may be executed by one or more parties hereto and such execution and delivery shall be considered valid, binding and effective for all purposes. At the request of any party hereto, all parties hereto agree to execute an original of this Agreement as well as any facsimile, telecopy or other reproduction hereof. This Agreement may be executed simultaneously in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

7.7 Rules of Construction .

All references in this Agreement to Sections and other subdivisions refer to the Sections and other subdivisions of this Agreement unless expressly provided otherwise. The words “this Agreement,” “herein,” “hereof,” “hereby,” “hereunder,” and words of similar import refer to this Agreement as a whole and not to any particular subdivision unless expressly so limited. Whenever the words “include,” “includes,” and “including” are used in this Agreement, such words shall be deemed to be followed by the words “without limitation.” Each reference herein to a Schedule or Exhibit refers to the item identified separately in writing by the parties as the described Schedule or Exhibit to this Agreement. All Schedules and Exhibits are hereby incorporated in and made a part of this Agreement as if set forth in full herein.

(signature page follows)

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and delivered in their name and on their behalf as of the date first above written.

MANHATTAN PHARMACEUTICALS, INC.

By: /s/ Michael McGuinness
Print Name:
Title: CFO

HEDRIN PHARMACEUTICALS K/S

By:	/s/ Michael McGuinness	By:	/s/ Florian Schonharting
Print Name:		Print Name:	
Title:	Director	Title:	Director

For the purposes of <u>Article 6</u> only:

NORDIC BIOTECH VENTURE FUND II K/S

By:		By:	
Print Name:		Print Name:	
Title:		Title:	

APPENDIX A

HEDRIN AGREEMENTS

1. Exclusive License Agreement for “Hedrin” among Thornton & Ross, Ltd., Kerris, S.A. and Manhattan Pharmaceuticals, Inc., dated June 26, 2007

2. Supply Agreement between Thornton & Ross, Ltd. and Manhattan Pharmaceuticals, Inc., dated June 26, 2007

3. Deed of License among Durminster Limited, Thornton & Ross, Ltd., Kerris, S.A. and Manhattan Pharmaceuticals, Inc., dated June 26, 2007

OTHER ASSIGNED CONTRACTS

None.

APPENDIX B

PERMITTED LIENS

None.

SCHEDULE 3.5

INTELLECTUAL PROPERTY

None.

SCHEDULE 3.6

ASSETS

1. Cash and cash equivalents held by MHA;

2. right to receive services of MHA personnel (including, but not limited to, the services to be provided under the Services Agreement); and

3. real property, plant and equipment of MHA

Exhibit 10.22

Execution Version

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this "***Agreement***") is made and entered into as of February 25, 2008, among Manhattan Pharmaceuticals, Inc., a Delaware corporation (the "***Company***"), and Nordic Biotech Venture Fund II K/S, a Danish limited liability partnership *(the "**Purchaser**").*

This Agreement is made pursuant to the Joint Venture Agreement, dated as of January 31, 2008 between the Company and the Purchaser (the "***JV Agreement***").

The Company and the Purchaser hereby agree as follows:

1. Definitions. Capitalized terms used and not otherwise defined herein that are defined in the JV Agreement shall have the meanings given such terms in the JV Agreement. As used in this Agreement, the following terms shall have the following meanings:

"***Advice***" shall have the meaning set forth in Section 6(d).

"***Effectiveness Date***" means the 105th calendar day following the applicable Filing Date; provided, however, in the event the Company is notified by the SEC that one of the above Registration Statements will not be reviewed or is no longer subject to further review and comments, the Effectiveness Date as to such Registration Statement shall be the fifth Trading Day following the date on which the Company is so notified if such date precedes the dates required above.

"***Effectiveness Period***" shall have the meaning set forth in Section 2(a).

"***Event***" shall have the meaning set forth in Section 2(b).

"***Event Date***" shall have the meaning set forth in Section 2(b).

"***Filing Date***" means, with respect to the initial Registration Statement required hereunder, the date that is 10 calendar days following the date on which the Company's Annual Report on Form 10-K for the year ended December 31, 2007 is required to be filed with the SEC and, with respect to any additional Registration Statements which may be required pursuant to Section 3(c), the 45th day following the date on which the Company first knows, or reasonably should have known that such additional Registration Statement is required hereunder.

"***Holder***" or "***Holders***" means the Purchaser and any other holder or holders, as the case may be, from time to time of Registrable Securities, provided that any holder other than the Purchaser agrees that the Purchaser shall act as agent for all Holders pursuant to Section 6(f) hereof.

"***Indemnified Party***" shall have the meaning set forth in Section 5(c).

"***Indemnifying Party***" shall have the meaning set forth in Section 5(c).

"***Losses***" shall have the meaning set forth in Section 5(a).

"***Proceeding***" means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

"***Prospectus***" means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated under the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

"***Registrable Securities***" means all of (i) the Conversion Shares issuable and (ii) any shares of Common Stock issued or issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the foregoing.

"***Registration Statement***" means the initial registration statement required to be filed hereunder and any additional registration statements contemplated by Sections 2(c) and 3(c), including (in each case) the Prospectus, amendments and supplements to such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference or deemed to be incorporated by reference in such registration statement.

"***Rule 415***" means Rule 415 promulgated by the SEC pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC having substantially the same purpose and effect as such Rule.

"***Rule 424***" means Rule 424 promulgated by the SEC pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC having substantially the same purpose and effect as such Rule.

"***SEC***" shall mean the United States Securities and Exchange Commission.

"***SEC Guidance***" means (i) any publicly-available written guidance, or rule of general applicability of the SEC staff, or (ii) written comments, requirements or requests of the SEC staff to the Company in connection with the review of the Registration Statements.

"***Selling Stockholder Questionnaire***" shall have the meaning set forth in Section 3(a).

"***Trading Day***" means a day on which the Common Stock is traded on a Trading Market

"***Trading Market***" means whichever of the New York Stock Exchange, the American Stock Exchange, the Nasdaq Global Market, the Nasdaq Global Select Market, the Nasdaq Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted on the date in question.

2. Shelf Registration.

(a) On or prior to each Filing Date, the Company shall prepare and file with the SEC a "Shelf" Registration Statement covering the resale of the Registrable Securities on such Filing Date that are not then registered on an effective Registration Statement for an offering to be made on a continuous basis pursuant to Rule 415. The Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form in accordance herewith) and shall contain substantially the "Plan of Distribution" attached hereto as Annex A; provided, however, that no Holder shall be named as an "underwriter" in the Registration Statement without the Holder's prior written consent. Subject to the terms of this Agreement, the Company shall use commercially reasonable efforts to cause the Registration Statement to be declared effective under the Securities Act as promptly as possible after the filing thereof, but in any event prior to the applicable Effectiveness Date, and shall use commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act until all Registrable Securities covered by such Registration Statement have been sold or may be sold without volume restrictions pursuant to Rule 144 (or any successor Rule under the Securities Act) as determined by the counsel to the Company pursuant to a written opinion letter to such effect, addressed and acceptable to the Company's transfer agent and the affected Holders (the "***Effectiveness Period***"). The Company shall telephonically request effectiveness of a Registration Statement as of 5:00 pm Eastern Time on a Trading Day. The Company shall immediately notify the Holders via facsimile of the effectiveness of a Registration Statement on the same Trading Day that the Company telephonically confirms effectiveness with the SEC, which shall be the date requested for effectiveness of a Registration Statement. The Company shall, by 9:30 am Eastern Time on the Trading Day after the Registration Statement is first declared effective by the SEC, file a Form 424(b)(5) with the SEC. Failure to so notify the Holder within 1 Trading Day of such notification shall be deemed an Event under Section 2(b).

(b) If: (i) a Registration Statement is not filed on or prior to its Filing Date or the Company files a Registration Statement without affording the Holders the opportunity to review and comment on the same as required by Section 3(a), or (ii) the Company fails to file with the SEC a request for acceleration in accordance with Rule 461 promulgated under the Securities Act, within five Trading Days of the date that the Company is notified (orally or in writing, whichever is earlier) by the SEC that a Registration Statement will not be "reviewed," or not subject to further review, or (iii) prior to its Effectiveness Date, the Company fails to file a pre-effective amendment and otherwise respond in writing to comments made by the SEC in respect of such Registration Statement within 10 calendar days after the receipt of comments by or notice from the SEC that such amendment is required in order for a Registration Statement to be declared effective, or (iv) a Registration Statement filed or required to be filed hereunder is not

declared effective by the SEC by its Effectiveness Date, or (v) after the Effectiveness Date, a Registration Statement ceases for any reason to remain continuously effective as to all Registrable Securities for which it is required to be effective, or the Holders are not permitted to utilize the Prospectus therein to resell such Registrable Securities for 10 consecutive calendar days but no more than an aggregate of 15 calendar days during any 12-month period (which need not be consecutive Trading Days) (any such failure or breach being referred to as an "***Event***", and for purposes of clause (i) or (iv) the date on which such Event occurs, or for purposes of clause (ii) the date on which such five Trading Day period is exceeded, or for purposes of clause (iii) the date which such 10 calendar day period is exceeded, or for purposes of clause (v) the date on which such 10 or 15 calendar day period, as applicable, is exceeded being referred to as "***Event Date***"), then in addition to any other rights the Holders may have hereunder or under applicable law, on each such Event Date and on each monthly anniversary of each such Event Date (if the applicable Event shall not have been cured by such date) until the applicable Event is cured, the Company shall pay to each Holder an amount in cash, as partial liquidated damages and not as a penalty, equal to one-half percent (0.5%) of the aggregate Investment Amount paid by such Holder pursuant to the JV Agreement for any Registrable Securities then held by such Holder; provided, however, that in no event shall the aggregate amount payable by the Company to all Holders under this sentence exceed nine percent (9%) of the Investment Amount. If the Company fails to pay any partial liquidated damages pursuant to this Section in full within seven days after the date payable, the Company will pay interest thereon at a rate of nine percent (9%) per annum (or such lesser maximum amount that is permitted to be paid by applicable law) to the Holder, accruing daily from the date such partial liquidated damages are due until such amounts, plus all such interest thereon, are paid in full. The partial liquidated damages pursuant to the terms hereof shall apply on a daily pro-rata basis for any portion of a month prior to the cure of an Event.

(c) If at any time the SEC takes the position that the offering of some or all of the Registrable Securities in a Registration Statement is not eligible to be made on a delayed or continuous basis under the provisions of Rule 415 or requires any Holder to be named as an "underwriter", the Company shall use its commercially reasonable efforts to persuade the SEC that the offering contemplated by the Registration Statement is a valid secondary offering and not an offering "by or on behalf of the issuer" as defined in Rule 415 and that none of the Holders is an "underwriter". The Holders shall have the right to participate or have their counsel participate in any meetings or discussions with the SEC regarding the SEC's position and to comment or have their counsel comment on any written submission made to the SEC with respect thereto. No such written submission shall be made to the SEC to which the Holders' counsel reasonably objects. In the event that, despite the Company's commercially reasonable efforts and compliance with the terms of this Section 2(c), the SEC refuses to alter its position, the Company shall remove from the Registration Statement such portion of the Registrable Securities (the ***"Cut Back Shares"***) and/or agree to such restrictions and limitations on the registration and resale of the Registrable Securities as the SEC may require to assure the Company's compliance with the requirements of Rule 415; provided, however, that the Company shall not agree to name any Holder as an "underwriter" in such Registration Statement without the prior written consent of such Holder (collectively, the ***"SEC Restrictions"***). Any cut-back

imposed on the Holders pursuant to this Section 2(c) shall, unless the SEC Restrictions otherwise require or provide and unless otherwise directed in writing by a Holder as to its Registrable Securities, will first be applied to Registrable Securities represented by the Conversion Shares other than Warrant Shares (applied, in the case that some of such shares of Common Stock may be registered, to the Holders on a pro rata basis based on the total number of unregistered Conversion Shares other than Warrant Shares held by such Holders) and second to the Warrant Shares (applied, in the case that some Warrant Shares may be registered, to the Holders on a pro rata basis based on the total number of unregistered Warrant Shares held by such Holders). No liquidated damages shall accrue on or as to any Cut Back Shares until such time as the Company is able to effect the registration of the Cut Back Shares in accordance with any SEC Restrictions (such date, the ***"Restriction Termination Date"***). From and after the Restriction Termination Date, all of the provisions of this Section 2 (including the liquidated damages provisions) shall again be applicable to the Cut Back Shares; provided, however, that for such purposes, the Filing Date with respect to any such Cut Back Shares shall be the 45th day following the Restriction Termination Date.

3. Registration Procedures.

In connection with the Company's registration obligations hereunder, the Company shall:

(a) Not less than five Trading Days prior to the filing of each Registration Statement or any related Prospectus or any amendment or supplement thereto (including any document that would be incorporated or deemed to be incorporated therein by reference), the Company shall, (i) furnish to each Holder copies of all such documents proposed to be filed, which documents (other than those incorporated or deemed to be incorporated by reference) will be subject to the review of such Holders, and (ii) cause its officers and directors, counsel and independent certified public accountants to respond to such inquiries as shall be necessary, in the reasonable opinion of respective counsel to conduct a reasonable investigation within the meaning of the Securities Act. The Company shall not file a Registration Statement or any such Prospectus or any amendments or supplements thereto to which the Holders of a majority of the Registrable Securities shall reasonably object in good faith, provided that, the Company is notified of such objection in writing no later than five Trading Days after the Holders have been so furnished copies of such documents. Each Holder agrees to furnish to the Company a completed Questionnaire in the form attached to this Agreement as Annex B (a "***Selling Stockholder Questionnaire***") not less than two Trading Days prior to the Filing Date or by the end of the fourth Trading Day following the date on which such Holder receives draft materials in accordance with this Section.

(b) (i) Prepare and file with the SEC such amendments, including post-effective amendments, to a Registration Statement and the Prospectus used in connection therewith as may be necessary to keep a Registration Statement continuously effective as to the applicable Registrable Securities for the Effectiveness Period and prepare and file with the SEC such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities; (ii) cause the related Prospectus to be

amended or supplemented by any required Prospectus supplement (subject to the terms of this Agreement), and as so supplemented or amended to be filed pursuant to Rule 424; (iii) respond as promptly as reasonably possible to any comments received from the SEC with respect to a Registration Statement or any amendment thereto and as promptly as reasonably possible provide the Holders true and complete copies of all correspondence from and to the SEC relating to a Registration Statement; and (iv) comply in all material respects with the provisions of the Securities Act and the Exchange Act with respect to the disposition of all Registrable Securities covered by a Registration Statement during the applicable period in accordance (subject to the terms of this Agreement) with the intended methods of disposition by the Holders thereof set forth in such Registration Statement as so amended or in such Prospectus as so supplemented.

(c) If during the Effectiveness Period, there occurs any change in the Adjusted Transaction Price (as defined in the JV Agreement) or the Per Share Warrant Price (as defined in the Warrant) such that additional shares of Common Stock become issuable upon the exercise of the Put Option, the Call Option or the Warrants, then the Company shall file as soon as reasonably practicable but in any case prior to the applicable Filing Date, an additional Registration Statement covering the resale by the Holders of such additional shares of Common Stock, but only to the extent that such additional shares of Common Stock are not at the time covered by an effective Registration Statement.

(d) Notify the Holders of Registrable Securities to be sold as promptly as reasonably possible (i)(A) when a Prospectus or any Prospectus supplement or post-effective amendment to a Registration Statement is proposed to be filed; (B) when the SEC notifies the Company whether there will be a "review" of such Registration Statement and whenever the SEC comments in writing on such Registration Statement (the Company shall provide true and complete copies thereof and all written responses thereto to each of the Holders); and (C) with respect to a Registration Statement or any post-effective amendment, when the same has become effective; (ii) of any request by the SEC or any other Federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information; (iii) of the issuance by the SEC or any other federal or state governmental authority of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose; and (v) of the occurrence of any event or passage of time that makes the financial statements included in a Registration Statement ineligible for inclusion therein or any statement made in a Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to a Registration Statement, Prospectus or other documents so that, in the case of a Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(e) Use commercially reasonable efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(f) Furnish to each Holder, without charge, at least one conformed copy of each such Registration Statement and each amendment thereto, including financial statements and schedules, all documents incorporated or deemed to be incorporated therein by reference to the extent requested by such Holder, and all exhibits to the extent requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the SEC.

(g) Promptly deliver to each Holder, without charge, as many copies of the Prospectus or Prospectuses (including each form of prospectus) and each amendment or supplement thereto as such Persons may reasonably request in connection with resales by the Holder of Registrable Securities. Subject to the terms of this Agreement, the Company hereby consents to the use of such Prospectus and each amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto, except after the giving on any notice pursuant to Section 3(d).

(h) If NASD Rule 2710 requires any broker-dealer to make a filing prior to executing a sale by a Holder, make an Issuer Filing with the NASD, Inc. Corporate Financing Department pursuant to NASD Rule 2710(b)(10)(A)(i) and respond within five Trading Days to any comments received from NASD in connection therewith, and pay the filing fee required in connection therewith.

(i) Prior to any resale of Registrable Securities by a Holder, use its commercially reasonable efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from the Registration or qualification) of such Registrable Securities for the resale by the Holder under the securities or Blue Sky laws of such jurisdictions within the United States as any Holder reasonably requests in writing, to keep each registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things reasonably necessary to enable the disposition in such jurisdictions of the Registrable Securities covered by each Registration Statement; provided, that the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified, subject the Company to any material tax in any such jurisdiction where it is not then so subject or file a general consent to service of process in any such jurisdiction.

(j) If requested by the Holders, cooperate with the Holders to facilitate the timely preparation and delivery of certificates representing Registrable Securities to be delivered to a transferee pursuant to a Registration Statement, which certificates shall be free, to the extent permitted by the JV Agreement, of all restrictive legends, and to enable

such Registrable Securities to be in such denominations and registered in such names as any such Holders may request.

(k) Upon the occurrence of any event contemplated by this Section 3, as promptly as reasonably possible under the circumstances taking into account the Company's good faith assessment of any adverse consequences to the Company and its stockholders of the premature disclosure of such event, prepare a supplement or amendment, including a post-effective amendment, to a Registration Statement or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, neither a Registration Statement nor such Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Company notifies the Holders in accordance with clauses (iii) through (v) of Section 3(d) above to suspend the use of any Prospectus until the requisite changes to such Prospectus have been made, then the Holders shall suspend use of such Prospectus. The Company will use commercially reasonable efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable. The Company shall be entitled to exercise its right under this Section 3(k) to suspend the availability of a Registration Statement and Prospectus, subject to the payment of partial liquidated damages pursuant to Section 2(b), for a period not to exceed 60 days (which need not be consecutive days) in any 12-month period.

(l) Comply with all applicable rules and regulations of the SEC.

(m) The Company may require each selling Holder to furnish to the Company a certified statement as to the number of shares of Common Stock beneficially owned by such Holder and, if required by the SEC, the person thereof that has voting and dispositive control over the Shares. During any periods that the Company is unable to meet its obligations hereunder with respect to the registration of the Registrable Securities solely because any Holder fails to furnish such information within three Trading Days of the Company's request, any rights of such Holder under this Agreement, including, without limitation, the rights to include such Holder's Registrable Securities in the Registration Statement and the liquidated damages that are accruing at such time as to such Holder, shall be tolled and any Event that may otherwise occur solely because of such delay shall be suspended as to such Holder only, until such information is delivered to the Company.

4. Registration Expenses. All fees and expenses incident to the performance of or compliance with this Agreement by the Company shall be borne by the Company whether or not any Registrable Securities are sold pursuant to a Registration Statement. The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (A) with respect to filings required to be made with the Trading Market on which the Common Stock is then listed for trading, (B) in compliance with applicable state securities or Blue Sky laws reasonably agreed to by the Company in writing (including, without limitation, fees and disbursements of counsel for the Company in connection with Blue Sky qualifications or exemptions of the Registrable Securities

and determination of the eligibility of the Registrable Securities for investment under the laws of such jurisdictions as requested by the Holders) and (C) if not previously paid by the Company in connection with an Issuer Filing, with respect to any filing that may be required to be made by any broker through which a Holder intends to make sales of Registrable Securities with NASD Regulation, Inc. pursuant to the NASD Rule 2710, so long as the broker is receiving no more than a customary brokerage SEC in connection with such sale), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses if the printing of prospectuses is reasonably requested by the holders of a majority of the Registrable Securities included in a Registration Statement), (iii) messenger, telephone and delivery expenses, (iv) fees and disbursements of counsel for the Company, (v) Securities Act liability insurance, if the Company so desires such insurance, and (vi) fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any broker or similar SECs or, except to the extent provided for in the Transaction Documents, any legal fees or other costs of the Holders.

5. Indemnification

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Holder, the officers, directors, members, partners, agents, brokers (including brokers who offer and sell Registrable Securities as principal as a result of a pledge or any failure to perform under a margin call of Common Stock), investment advisors and employees (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title) of each of them, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, members, partners, agents and employees (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title) of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable attorneys' fees) and expenses (collectively, "***Losses***"), as incurred, arising out of or relating to (i) any untrue or alleged untrue statement of a material fact contained in a Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading, or (ii) any violation or alleged violation by the Company of the Securities Act, Exchange Act or any state securities law, or any rule or regulation thereunder, in connection with the performance of its obligations under this Agreement, except to the extent, but only to the extent, that (A) such untrue statements or omissions are based

solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in a Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (B) in the case of an occurrence of an event of the type specified in Section 3(d)(iii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of the Advice contemplated in Section 6(d). The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding arising from or in connection with the transactions contemplated by this Agreement of which the Company is aware.

(b) Indemnification by Holders. Each Holder shall, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents or employees of such controlling Persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, to the extent arising out of or based solely upon: (i) such Holder's failure to comply with the prospectus delivery requirements of the Securities Act or (ii) any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus, or any form of prospectus, or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading (A) to the extent, but only to the extent, that such untrue statement or omission is contained in any information so furnished in writing by such Holder to the Company specifically for inclusion in such Registration Statement or such Prospectus or (B) to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in a Registration Statement (it being understood that the Holder has approved Annex A hereto for this purpose), such Prospectus or such form of Prospectus or in any amendment or supplement thereto or (C) in the case of an occurrence of an event of the type specified in Section 3(d)(iii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of the Advice contemplated in Section 6(d). In no event shall the liability of any selling Holder hereunder be greater in amount than the dollar amount of the net proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "***Indemnified Party***"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "***Indemnifying Party***") in writing, and the Indemnifying Party shall have the right to assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in

connection with defense thereof; provided, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless: (i) the Indemnifying Party has agreed in writing to pay such fees and expenses; (ii) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding; or (iii) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and such Indemnified Party shall reasonably believe that a material conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and the reasonable fees and expenses of one separate counsel shall be at the expense of the Indemnifying Party). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

Subject to the terms of this Agreement, all reasonable fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within ten Trading Days of written notice thereof to the Indemnifying Party; provided, that the Indemnified Party shall promptly reimburse the Indemnifying Party for that portion of such fees and expenses applicable to such actions for which such Indemnified Party is judicially determined to be not entitled to indemnification hereunder.

(d) Contribution. If the indemnification under Section 5(a) or 5(b) is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless for any Losses, then each Indemnifying Party shall contribute to the amount paid or payable by such Indemnified Party, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to

information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in this Agreement, any reasonable attorneys' or other fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 5(d), no Holder shall be required to contribute, in the aggregate, any amount in excess of the amount by which the proceeds actually received by such Holder from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission, except in the case of fraud by such Holder.

The indemnity and contribution agreements contained in this Section are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties.

6. Miscellaneous

(a) Remedies. In the event of a breach by the Company or by a Holder, of any of their respective obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, shall be entitled to specific performance of its rights under this Agreement. The Company and each Holder agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agrees that, in the event of any action for specific performance in respect of such breach, it shall not assert or shall waive the defense that a remedy at law would be adequate.

(b) No Piggyback on Registrations. Except as set forth on Schedule 6(b) attached hereto, neither the Company nor any of its security holders (other than the Holders in such capacity pursuant hereto) may include securities of the Company in the Registration Statement other than the Registrable Securities. Except for the rights granted hereunder, no Person has any right to cause the Company to effect the registration under the Securities Act of any securities of the Company. The Company shall not file any other registration statements until the initial Registration Statement required hereunder is declared effective by the SEC, provided that this Section 6(b) shall not prohibit the Company from filing amendments to registration statements filed prior to the date of this Agreement.

(c) Compliance. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it in connection with sales of Registrable Securities pursuant to a Registration Statement.

(d) Discontinued Disposition. Each Holder agrees by its acquisition of such Registrable Securities that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Section 3(d), such Holder will forthwith discontinue disposition of such Registrable Securities under a Registration Statement until such Holder's receipt of the copies of the supplemented Prospectus and/or amended Registration Statement or until it is advised in writing (the "***Advice***") by the Company that the use of the applicable Prospectus may be resumed, and, in either case, has received copies of any additional or supplemental filings that are incorporated or deemed to be incorporated by reference in such Prospectus or Registration Statement. The Company will use commercially reasonable efforts to ensure that the use of the Prospectus may be resumed as promptly as it practicable. The Company agrees and acknowledges that any periods during which the Holder is required to discontinue the disposition of the Registrable Securities hereunder shall be subject to the provisions of Section 2(b).

(e) Piggy-Back Registrations. If at any time during the Effectiveness Period there is not an effective Registration Statement covering all of the Registrable Securities and the Company shall determine to prepare and file with the SEC a registration statement relating to an offering for its own account or the account of others under the Securities Act of any of its equity securities, other than on Form S-4 or Form S-8 (each as promulgated under the Securities Act) or their then equivalents relating to equity securities to be issued solely in connection with any acquisition of any entity or business or equity securities issuable in connection with the stock option or other employee benefit plans, then the Company shall send to each Holder a written notice of such determination and, if within fifteen days after the date of such notice, any such Holder shall so request in writing, the Company shall include in such registration statement all or any part of such Registrable Securities such Holder requests to be registered; provided, however, that, the Company shall not be required to register any Registrable Securities pursuant to this Section 6(e) that are eligible for resale without volume restrictions pursuant to Rule 144 (or any successor Rule under the Securities Act) promulgated under the Securities Act or that are the subject of a then effective Registration Statement.

(f) Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the same shall be in writing and signed by the Company and each Holder of the then outstanding Registrable Securities. Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of Holders and that does not directly or indirectly affect the rights of other Holders may be given by Holders of all of the Registrable Securities to which such waiver or consent relates; provided, however, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the immediately preceding sentence.

(g) Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be delivered as set forth in the JV Agreement.

(h) Successors and Assigns; Purchaser as Agent. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. The Company may not assign its rights or obligations hereunder without the prior written consent of all of the Holders of the then-outstanding Registrable Securities. Each Holder may transfer or assign, in whole or from time to time in part, to one or more persons its rights hereunder in connection with the transfer of Registrable Securities by such Holder to such person, provided that such Holder complies with all laws applicable thereto and provides written notice of assignment to the Company promptly following such assignment. Each Holder and each assignee of a Holder agrees (by acceptance of the rights afforded to such party under this Agreement and without any further action) that (i) the Purchaser shall be the agent for each Holder and each assignee of a Holder, solely for purposes of receiving notices or other information required to be sent by the Company to the Holders or soliciting consents from the Holders, and (ii) the Company need only deal with the Purchaser with respect to notices and consents, and that the Purchaser may consent to any request without consulting any such Holder or assignee.

(i) No Inconsistent Agreements. Neither the Company nor any of its subsidiaries has entered, as of the date hereof, nor shall the Company or any of its subsidiaries, on or after the date of this Agreement, enter into any agreement with respect to its securities, that would have the effect of impairing the rights granted to the Holders in this Agreement or otherwise conflicts with the provisions hereof. Except as set forth on Schedule 6(i), neither the Company nor any of its subsidiaries has previously entered into any agreement granting any registration rights with respect to any of its securities to any Person that have not been satisfied in full.

(j) Execution and Counterparts. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

(k) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be determined in accordance with the provisions of the JV Agreement.

(l) Cumulative Remedies. The remedies provided herein are cumulative and not exclusive of any other remedies provided by law.

(m) Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

(n) Headings. The headings in this Agreement are for convenience of reference only, do not constitute a part of this Agreement, and shall not be deemed to limit or affect any of the provisions hereof.

(o) Independent Nature of Holders' Obligations and Rights. The obligations of each Holder hereunder are several and not joint with the obligations of any other Holder hereunder, and no Holder shall be responsible in any way for the performance of the obligations of any other Holder hereunder. Nothing contained herein or in any other agreement or document delivered at any closing, and no action taken by any Holder pursuant hereto or thereto, shall be deemed to constitute the Holders as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Holders are in any way acting in concert with respect to such obligations or the transactions contemplated by this Agreement. Each Holder shall be entitled to protect and enforce its rights, including without limitation the rights arising out of this Agreement, and it shall not be necessary for any other Holder to be joined as an additional party in any proceeding for such purpose.

****

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

MANHATTAN PHARMACEUTICALS, INC.

By: _____
Name: Michael G. McGuinness
Title: CFO.

NORDIC BIOTECH VENTURE FUND II K/S

By: s/Florian Schonharting
Name:
Title: Partner

By: s/Christian Hansen
Name:
Title: Partner

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

MANHATTAN PHARMACEUTICALS, INC.

By: _____
Name:
Title:

NORDIC BIOTECH VENTURE FUND II K/S

By: _____
Name: C. Hansen
Title: Partner

By: _____
Name:
Title:

Execution Version

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

MANHATTAN PHARMACEUTICALS, INC.

By: _____
Name:
Title:

NORDIC BIOTECH VENTURE FUND II K/S

By: _____
Name:
Title:

By: _____
Name:
Title:

Plan of Distribution

Each selling stockholder (the "Selling Stockholders") of the Common Stock and any of their pledgees, assignees, and successors-in-interest may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Stockholder may use any one or more of the following methods when selling shares:

- 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;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker-dealers may agree with the Selling Stockholders to sell a specified number of such shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell shares under Rule 144 under the Securities Act of 1933, as amended (the "Securities Act"), if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with NASDR Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with NASDR IM-2440.

The Selling Stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the Common Stock. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed eight percent (8%).

Annex B

MANHATTAN PHARMACEUTICALS, INC.

Selling Securityholder Notice and Questionnaire

The undersigned beneficial owner of common stock, par value $0.001 per share (the "***Common Stock***"), of Manhattan Pharmaceuticals, Inc., a Delaware corporation (the "***Company***"), (the "***Registrable Securities***") understands that the Company has filed or intends to file with the Securities and Exchange SEC (the "***SEC***") a registration statement (the "***Registration Statement***") for the registration and resale under Rule 415 of the Securities Act of 1933, as amended (the "***Securities Act***"), of the Registrable Securities, in accordance with the terms of the Registration Rights Agreement, dated as of February __, 2008 (the "***Registration Rights Agreement***"), between the Company and the Purchaser named therein. A copy of the Registration Rights Agreement is available from the Company upon request at the address set forth below. All capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Registration Rights Agreement.

Certain legal consequences arise from being named as a selling securityholder in the Registration Statement and the related prospectus. Accordingly, holders and beneficial owners of Registrable Securities are advised to consult their own securities law counsel regarding the consequences of being named or not being named as a selling securityholder in the Registration Statement and the related prospectus.

NOTICE

The undersigned beneficial owner (the "***Selling Securityholder***") of Registrable Securities hereby elects to include the Registrable Securities owned by it and listed below in Item 3 (unless otherwise specified under such Item 3) in the Registration Statement.

The undersigned hereby provides the following information to the Company and represents and warrants that such information is accurate:

QUESTIONNAIRE

1. Name.

(a) Full Legal Name of Selling Securityholder

_____

(b) Full Legal Name of Registered Holder (if not the same as (a) above) through which Registrable Securities Listed in Item 3 below are held:

_____

(c) Full Legal Name of Natural Control Person (which means a natural person who directly or indirectly alone or with others has power to vote or dispose of the securities covered by the questionnaire):

_____

2. Address for Notices to Selling Securityholder:

_____
_____
_____
Telephone:_____
Fax:_____
Contact Person:_____

3. Beneficial Ownership of Registrable Securities:

(a) Type and Number of Registrable Securities beneficially owned:

_____
_____
_____

4. Broker-Dealer Status:

(a) Are you a broker-dealer?

Yes ☐ No ☐

(b) If "yes" to Section 4(a), did you receive your Registrable Securities as compensation for investment banking services to the Company.

Yes ☐ No ☐

Note: If no, the SEC's staff has indicated that you should be identified as an underwriter in the Registration Statement.

(c) Are you an affiliate of a broker-dealer?

Yes ☐ No ☐

(d) If you are an affiliate of a broker-dealer, do you certify that you bought the Registrable Securities in the ordinary course of business, and at the time of the purchase of the Registrable Securities to be resold, you had no agreements or understandings, directly or indirectly, with any person to distribute the Registrable Securities?

Yes ☐ No ☐

Note: If no, the SEC's staff has indicated that you should be identified as an underwriter in the Registration Statement.

5. Beneficial Ownership of Other Securities of the Company Owned by the Selling Securityholder.

Except as set forth below in this Item 5, the undersigned is not the beneficial or registered owner of any securities of the Company other than the Registrable Securities listed above in Item 3.

(a) Type and Amount of Other Securities beneficially owned by the Selling Securityholder:

_____

_____

6. Relationships with the Company:

Except as set forth below, neither the undersigned nor any of its affiliates, officers, directors or principal equity holders (owners of 5% of more of the equity securities of the undersigned) has held any position or office or has had any other material relationship with the Company (or its predecessors or affiliates) during the past three years.

State any exceptions here:

_____

_____

The undersigned agrees to promptly notify the Company of any inaccuracies or changes in the information provided herein that may occur subsequent to the date hereof at any time while the Registration Statement remains effective.

By signing below, the undersigned consents to the disclosure of the information contained herein in its answers to Items 1 through 6 and the inclusion of such information in the Registration Statement and the related prospectus and any amendments or supplements thereto. The undersigned understands that such information will be relied upon by the Company in connection with the preparation or amendment of the Registration Statement and the related prospectus.

IN WITNESS WHEREOF the undersigned, by authority duly given, has caused this Notice and Questionnaire to be executed and delivered either in person or by its duly authorized agent.

Dated: _____ Beneficial Owner: _____

By:_____
Name:
Title:

PLEASE FAX A COPY OF THE COMPLETED AND EXECUTED NOTICE AND QUESTIONNAIRE, AND RETURN THE ORIGINAL BY OVERNIGHT MAIL, TO:

1710755.2

LS DRAFT
ATTORNEY WORK PRODUCT
PRIVILEGED & CONFIDENTIAL

Exhibit 10.23

AMENDMENT TO EMPLOYMENT AGREEMENT

BY AND BETWEEN

MANHATTAN PHARMACEUTICALS, INC. AND DOUGLAS ABEL

This AMENDMENT TO EMPLOYMENT AGREEMENT (the "Amendment") is entered into as of March 28, 2008, by and between Manhattan Pharmaceuticals, Inc. (the "Company") and Douglas Abel (the "Executive").

WITNESSETH THAT:

WHEREAS, the Company and the Executive entered into that certain Employment Agreement, dated as of April 1, 2005 (the "Agreement"); and

WHEREAS, the Company and the Executive desire to extend the Term (as defined in the Agreement) of the Agreement by a period of one year.

NOW THEREFORE, for and in consideration of the foregoing, the Company and the Executive hereby agree as follows:

1. The Term is hereby extended by one year, through April 1, 2009, and, notwithstanding any other provision of the Agreement to the contrary, such one-year extension shall be deemed an "Additional Term" (as defined in the Agreement).

2. This Amendment may be executed in counterparts, each of which shall constitute an original, but both of which together shall constitute one and same instrument. This Amendment shall be governed by, and construed and interpreted in accordance with, the laws of the State of New York, without giving effect to its principles of conflicts of laws.

3. Except as specifically amended hereby, the Agreement remains otherwise unmodified and in full force an effect, and is hereby ratified by the Company and the Executive.

IN WITNESS WHEREOF, the parties have signed this Amendment to Employment Agreement as of the day and year set forth above.

MANHATTAN PHARMACEUTICALS, INC.

By: Michael McGuinness
Chief Financial Officer

/s/ Michael McGuinness

DOUGLAS ABEL

/s/ Douglas Abel

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our report on our audits of the consolidated financial statements of Manhattan Pharmaceuticals, Inc. and Subsidiaries as of December 31, 2007 and 2006 and for the years then ended and on the consolidated statements of operations, changes in stockholders' equity (deficiency) and cash flows for the period from August 6, 2001 (date of inception) to December 31, 2007, included in this Annual Report on Form 10-K for the year ended December 31, 2007, is dated March 28, 2008. We consent to the incorporation by reference of our report in the following registration statements previously filed by the Company with the Securities and Exchange Commission pursuant to the Securities Act of 1933: the registration statements on Forms S-3 with SEC File Nos. 333-131814 and the registration statements on Forms S-8 with SEC file Nos. 333-15807, 333-112888, 333-112889 and 333-48531.

/s/ J.H. Cohn LLP

Roseland, New Jersey
March 28, 2008

EXHIBIT 31.1

CERTIFICATION

I, Douglas Abel, certify that:

1. I have reviewed this Annual Report on Form 10-K of Manhattan Pharmaceuticals, Inc. (the "Registrant");

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

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

4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d - 15(e)) for the Registrant and have:

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

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: March 31, 2008

/s/ Douglas Abel

Douglas Abel
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Michael G. McGuinness, certify that:

1. I have reviewed this Annual Report on Form 10-K of Manhattan Pharmaceuticals, Inc. (the "Registrant");

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

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

4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d - 15(e)) for the Registrant and have:

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

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: March 31, 2008

/s/ Michael G. McGuinness

Michael G. McGuinness
Chief Financial Officer

Exhibit 32.1

CERTIFICATION

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officers of Manhattan Pharmaceuticals, Inc. hereby certifies that, to the best of their knowledge:

(a) the Annual Report on Form 10-K of Manhattan Pharmaceuticals, Inc. for the year ended December 31, 2007 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(b) information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Manhattan Pharmaceuticals, Inc.

Dated: March 31, 2008

/s/ Douglas Abel

Douglas Abel
President and Chief Executive Officer

Dated: March 31, 2008

/s/ Michael G. McGuinness

Michael G. McGuinness
Chief Financial Officer