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

FORM 20-F/A
(Amendment No. 2)

(Mark One)

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

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

For the fiscal year ended December 31, 2012

OR

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

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

COMMISSION FILE NUMBER: 001-34949

TEKMIRA PHARMACEUTICALS CORPORATION

(Exact name of Registrant as specified in its charter)

British Columbia
(Jurisdiction of incorporation or organization)

100—8900 Glenlyon Parkway
Burnaby, British Columbia, Canada, V5J 5J8
(Address of principal executive offices)

Mark J. Murray
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Burnaby, British Columbia, Canada, V5J 5J8
Telephone: +1 604 419 3200
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(Name, Telephone, Email and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to section 12(b) of the Act:

Title of each Class	Name of each exchange on which registered
Common Shares, without par value	NASDAQ Capital Market

Securities registered or to be registered pursuant to Section 12(g) of the Act:

N/A
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

N/A
(Title of Class)

The number of outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2012 was 14,305,356 common shares.

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

If this report is an annual or a transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No x

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer x

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP x International Financial Reporting Standards as issued by the International Accounting Standards Board ☐ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the *Exchange Act*). Yes ☐ No x

EXPLANATORY NOTE

This Amendment No. 2 ("Amendment No. 2") to the Annual Report on Form 20-F of Tekmira Pharmaceuticals Corporation (the "Company") for the fiscal year ended December 31, 2012 (the "Form 20-F"), originally filed with the Securities and Exchange Commission (the "SEC") on March 27, 2013 (the "Original Report") and amended on July 16, 2013, is being filed in response to comments from the SEC and solely for the purpose of (i) re-filing the agreement filed as Exhibit 4.28 to the Original Report, as amended, in order to restore redacted information contained under the table in Section 4.3(b) thereof that was subject to a confidential treatment request by the Company and (ii) to amend and restate the disclosure contained in Item 4B of Part I of the Original Report.

This Amendment No. 2 consists of a cover page, this explanatory note, business overview (Item 4B of Part I), a list of exhibits (Item 19 of Part III), a signature page, CEO and CFO certifications and Exhibit 4.28.

This Amendment No. 2 speaks as of the initial filing date of the Original Report. Other than as expressly set forth above, no part of the Original Report is being amended. Accordingly, other than as discussed above, this Amendment No. 2 does not purport to amend, update or restate any other information or disclosure included in the Original Report or reflect any events that have occurred after the initial filing date of the Original Report. As a result, the Company's Annual Report on Form 20-F for the fiscal year ended December 31, 2012 continues to speak as of March 27, 2013 or, to the extent applicable, such other date as may be indicated in the Original Report.

4B. Business Overview

Business Strategy

Tekmira's business strategy is to develop our proprietary RNAi therapeutic product candidates and to support our pharmaceutical partners as they advance their own RNAi product candidates using our lipid nanoparticle (LNP) delivery technology.

Technology, product development and licensing agreements

Our therapeutic product pipeline consists of products being developed internally with our research and development resources. We also support the development of our partners' products and are developing an Ebola antiviral product, called TKM-Ebola, under a Transformational Medical Technologies (TMT) contract with the U.S. Government. Our focus is on advancing products that utilize our proprietary LNP technology for the delivery of small interfering RNA (siRNA), multivalent RNA (MV-RNA), or Unlocked Nucleobase Analogs (UNA). These products are intended to treat diseases through a process known as RNA interference, which prevents the production of disease associated proteins. We have rights under the RNAi intellectual property of Alnylam Pharmaceuticals, Inc. to develop thirteen RNAi therapeutic products. In addition, we have exclusive access to use MV-RNA technology from Halo-Bio RNAi Therapeutics, Inc. and non-exclusive access to use UNAs from Marina Biotech, Inc. for the development of RNAi therapeutic products.

In the field of RNAi therapeutics, we have licensed our LNP delivery technology to Alnylam and Merck & Co., Inc., and Alnylam has provided certain access to our LNP delivery technology to some of its partners. In addition, we have ongoing research relationships with Bristol-Myers Squibb Company, the United States National Cancer Institute, the U.S. Government, through their TMT program, and other undisclosed pharmaceutical and biotechnology companies. Outside the field of RNAi, we have legacy licensing agreements with Talon Therapeutics, Inc. and Aradigm Corporation.

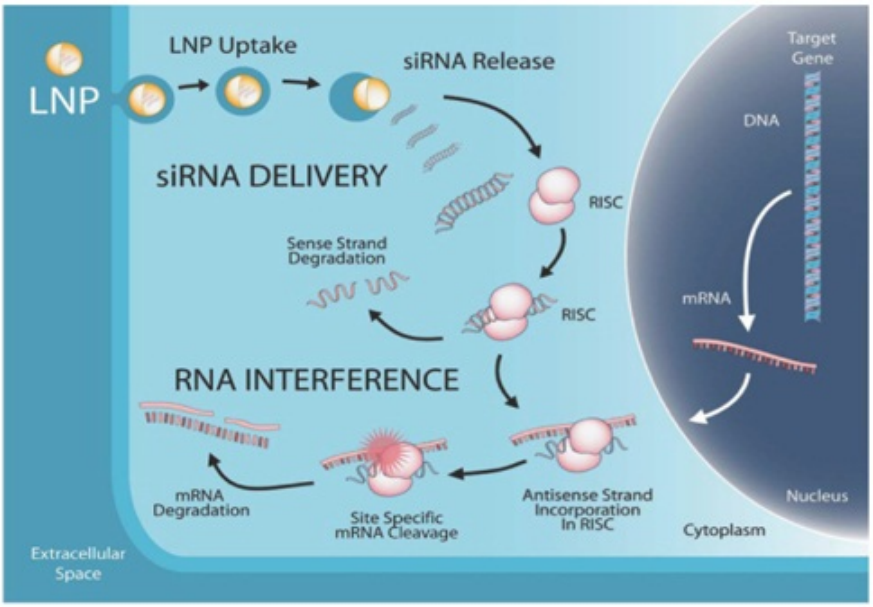
RNA Interference Therapeutics

RNAi is considered to be one of the most important discoveries in the field of biology in the last decade. The scientists who discovered the mechanism were awarded the 2006 Nobel Prize in Medicine. Intense research activity has subsequently uncovered the complex molecular mechanisms responsible for RNAi that are transforming the way that drug targets are discovered and validated. RNAi is a naturally occurring process that takes place inside cells, and includes processes whereby siRNA molecules profoundly suppress the production of specific proteins. Synthetic siRNA molecules are being developed as drugs that specifically suppress the production of disease-related proteins through RNAi.

In the cell, DNA carries the genetic information required to make each specific protein. Genes are first copied or transcribed into messenger RNA (mRNA), which, in turn, is translated into protein. Nearly all diseases are caused by either the absence of or over-production of a specific protein. If too much of a particular protein is the cause of disease then the therapeutic approach is to try to reduce its activity or amount. For example, a tumor can be caused by the over-production of a protein that stimulates cell growth.

Sequencing of the human genome has unlocked the information needed to design siRNA molecules directed against a wide range of disease-causing proteins. Using the mRNA sequence coding for the target protein, effective siRNA molecules can be designed much more rapidly than the time needed to synthesize and screen conventional drugs. siRNA-based drugs are short segments of synthetic double stranded RNA made up of a sense strand and an antisense strand. The sequence of the siRNA is designed so that the antisense strand will bind specifically to a complementary sequence on the mRNA coding for the target protein. When siRNA are introduced into the cell they are rapidly incorporated into an RNA-induced silencing complex (RISC). As illustrated in the diagram below, during this process the sense strand is unwound and discarded while the antisense strand remains in the RISC serving to guide the RISC complex to interact specifically with mRNA coding for the target protein. mRNA are cleaved in a sequence specific manner and then destroyed, preventing production of the target protein. Importantly, this process is catalytic and RISC associated siRNA can remain stable inside the cell for weeks, destroying many more copies of the target mRNA and maintaining target protein suppression for long periods of time.

Lipid Nanoparticle (LNP)-Enabled Delivery of siRNA and Mechanism of RNA Interference in Cells



RNAi has the potential to generate a broad new class of therapeutics that take advantage of the body's own natural processes to silence genes—or more specifically to eliminate specific gene-products, from the cell. While there are no RNAi therapeutics currently approved for commercial use, there are a number of RNAi products in development and several in human clinical trials. RNAi products are broadly applicable as they can silence, or eliminate the production of disease causing proteins from cells, thus creating opportunities for therapeutic intervention that have not been achievable with conventional drugs. Development of RNAi therapeutic products is currently limited by the instability of the siRNA molecules in the bloodstream and the inability of these molecules to access target cells or tissues following intravenous, or systemic, administration, and their inability to gain entry to the inside of target cells, where they carry out their action. Delivery technology is necessary to protect these drugs in the blood stream following administration, allow efficient delivery to the target cells and facilitate cellular uptake and release into the cytoplasm of the cell. Tekmira's LNP technology has been shown in pre-clinical studies to enable RNAi therapeutic products by overcoming these limitations, allowing efficient and selective 'silencing' or reduction of certain target proteins. We believe that Tekmira is strongly positioned to take advantage of the need for delivery technology that can efficiently encapsulate siRNA molecules and deliver them to sites of disease. We and our partners are advancing RNAi therapeutic product candidates using our LNP technology as the delivery vehicle to access target tissues and cells.

Tekmira's LNP Technology

Our LNP delivery technology allows siRNA to be encapsulated in a particle made of lipids (fats or oils) that can be administered intravenously and travel through the blood stream to target tissues or sites of disease. The nanoparticles are designed to stay in the circulation for periods of time that allow the particle to efficiently accumulate at sites of disease such as the liver or cancerous tumors. As illustrated in the diagram above, once the nanoparticles have accumulated at the target site, the cells take up the particle by a process called endocytosis in which the cell's membrane surrounds the particle. This envelope or endosome pinches off from the cell's membrane and migrates to the inside of the cell. The lipid nanoparticles undergo an interaction with the endosomal membrane and in the process the siRNA are released inside the cell. The released siRNA molecules engage the RISC complex, mediating RNAi.

Internal Product Development

TKM-PLK1

Our lead oncology product candidate, TKM-PLK1, has been shown in preclinical animal studies to selectively kill cancer cells, while sparing normal cells in adjacent healthy tissue. TKM-PLK1 targets PLK1 (polo-like kinase 1), a protein involved in tumor cell proliferation and a validated oncology target. Inhibition of PLK1 expression prevents the tumor cell from completing cell division, resulting in cell cycle arrest and death of the cancer cell.

Our preclinical studies have demonstrated that a single, systemic intravenous administration of TKM-PLK1 blocked PLK1 expression in liver tumors causing extensive tumor cell death. After repeat dosing, this result translated into significant inhibition of tumor growth and prolonged survival without evidence of the toxicities often associated with oncology drugs. The TKM-PLK1 anti-tumor efficacy results were confirmed to be the result of silencing PLK1 via RNA interference. Furthermore, certain LNP formulations provided anti-tumor efficacy in preclinical models of tumors outside the liver.

On December 22, 2010, we announced the initiation of patient treatment in a Phase 1 human clinical trial of TKM-PLK1. The Phase 1 clinical trial, conducted at medical centers in the United States, is an open label, multi-dose, dose escalation study designed to evaluate the safety, tolerability and pharmacokinetics of TKM-PLK1 as well as determining the maximum tolerated dose. The trial is enrolling patients with advanced solid tumors. Secondary objectives of the trial are to measure tumor response and the pharmacodynamic effects of TKM-PLK1 in patients providing biopsies.

On August 14, 2012, we released interim results from our TKM-PLK1 Phase 1 clinical trial showing that TKM-PLK1 was generally well tolerated and highlighting evidence of drug activity, including one patient with a partial response and another patient who attained stable disease. Based on these interim data, patient enrollment is continuing at 0.75 mg/kg. Once complete, results from the Phase 1 clinical trial, including additional measures of drug activity, will be presented at forthcoming scientific meetings. Tekmira anticipates initiating a TKM-PLK1 Phase 2 clinical trial in 2013.

TKM-Ebola

For many years, the Zaire species of Ebola virus (ZEBOV) has been associated with periodic outbreaks of hemorrhagic fever in human populations with mortality rates reaching 90%. There are no approved treatments for Ebola or other hemorrhagic fever viruses.

On May 28, 2010 we announced the publication of a series of studies demonstrating the ability of an RNAi therapeutic utilizing our LNP technology to protect non-human primates from Ebola virus, a highly contagious and lethal human infectious disease. We conducted the studies in collaboration with infectious disease researchers from Boston University and the United States Army Medical Research Institute for Infectious Diseases (USAMRIID) and were funded in part by the U.S. Government's Transformational Medical Technologies (TMT) program. These preclinical studies were published in the medical journal The Lancet and demonstrated that when siRNA targeting the Ebola virus and delivered by Tekmira's LNP technology were used to treat previously infected non-human primates, the result was 100 percent protection from an otherwise lethal dose of Zaire Ebola virus (Geisbert et al., The Lancet, Vol 375, May 29, 2010).

On July 14, 2010, we signed a contract with the United States Department of Defense (DoD), under their TMT program, to advance an RNAi therapeutic utilizing our LNP technology to treat Ebola virus infection. In the initial phase of the contract, we are eligible to receive up to US$34.7 million. This initial funding is for the development of TKM-Ebola, including completion of preclinical development, filing an IND application with the FDA and the completion of a Phase 1 human safety clinical trial. The initial funding stage and completion of the Phase 1 clinical trial is expected to be completed in the second half of 2014.

The United States DoD has the option of extending the contract beyond the initial funding period to support the advancement of TKM-Ebola through to the completion of clinical development and FDA approval. Based on the budget for the extended contract this would provide the Company with a total of up to US$140.0 million in funding for the entire program. Under the contract we invoice the United States DoD for direct labor, third party costs and an apportionment of overheads plus an incentive fee. The funding is paid through monthly reimbursements, and the

United States DoD has the ability to terminate at any time. The United States DoD's right to alter the scope of the work to be done, to terminate, suspend, or delay all or part of the work under the contract, and to issue temporary or permanent stop-work orders are described in the Federal Acquisition Regulations (FAR) sections 52.242-14 (Apr 1984); 52.242-15 (Aug 1989) (Alternate I, Apr 1984); 52.242-17 (Apr 1984); 52.243-2 (Aug 1987) (Alternate V, Apr 1984); and 52.249-6 (May 2004); all of which provisions are incorporated into the contract with Tekmira.

On August 6, 2012, we announced that we had received a temporary stop-work order from the United States DoD with respect to our TKM-Ebola program. On October 2, 2012, we disclosed that the temporary stop-work order was lifted by the United States DoD and work is now continuing on the development of the TKM-Ebola product.

In November 2012, we disclosed that we have submitted a modification request to the existing contract to the DoD in order to integrate recent advancements in LNP formulation and manufacturing technology in the TKM-Ebola development program. Tekmira has initiated pre-clinical and chemistry, manufacturing and control studies that support the use of these improvements in the program. This development strategy will be accommodated by modifications to the existing contract, allowing both Tekmira and TMT to benefit from the significant advancements in LNP formulation technology made by Tekmira since the commencement of the TMT-funded program in July 2010. The contract modification request is currently being negotiated while work is continuing on the contract. It is expected that the LNP formulation work will be completed and submitted to the FDA in the second half of 2013 in order to initiate a new Phase 1 clinical trial.

TKM-Ebola is being developed under specific FDA regulatory guidelines called the "Animal Rule." The Animal Rule provides that under certain circumstances, where it is unethical or not feasible to conduct human efficacy studies, the FDA may grant marketing approval based on adequate and well-controlled animal studies when the results of those studies establish that the drug is reasonably likely to produce clinical benefit in humans. Demonstration of the product's safety in humans is still required.

Additional Product Candidates

We have a number of other preclinical candidates in our pipeline addressing a wide range of therapeutic needs such as alcohol dependence and additional oncology targets. We will continue to generate data to support the advancement of the most promising of these targets, and we expect to be in a position to nominate our next product candidate for development in 2013.

Partnerships and Collaborations

Alnylam collaborations and licenses

On November 12, 2012, we entered into an agreement to settle all litigation between Tekmira and Alnylam and AlCana Technologies, Inc., and we also entered into a new licensing agreement with Alnylam that replaces all earlier licensing, cross-licensing, collaboration, and manufacturing agreements. Tekmira expects to enter into a separate cross license agreement with AlCana which will include milestone and royalty payments and AlCana has agreed not to compete in the RNAi field for five years. In conjunction with the Settlement, we paid AlCana US$300,000 and accrued a further US$1,500,000, which we expect to pay upon the execution of a cross license agreement with AlCana.

As a result of the new Alnylam license agreement, Tekmira received a total of US$65 million in cash payments in November 2012. This includes US$30 million associated with the termination of the manufacturing agreement and US$35 million associated with the termination of the previous license agreements, as well as a reduction of the milestone and royalty schedules associated with Alnylam's ALN-VSP, ALN-PCS, and ALN-TTR programs. Of the US$65 million received from Alnylam, US$18.7 million was subsequently paid by us to our lead legal counsel representing us in the lawsuit against Alnylam and AlCana, in satisfaction of the contingent obligation owed to that counsel. We are also eligible to receive an additional US$10 million in near-term milestones, comprised of a US$5 million payment upon ALN-TTR entering a Phase 3 or pivotal clinical trial and a US$5 million payment related to enabling drug production for the initiation of clinical trials for ALN-VSP in China. Both near-term milestones are expected to occur in 2013. In addition, Alnylam has transferred all agreed upon patents and patent applications related to LNP technology for the systemic delivery of RNAi therapeutic products, including the MC3 lipid family, to Tekmira, and we will own and control prosecution of this intellectual property portfolio. Tekmira is the only company able to sublicense LNP intellectual property in future platform-type relationships.

Alnylam has a license to use Tekmira's intellectual property to develop and commercialize products and may only grant access to Tekmira's LNP technology to its partners if it is part of a product sublicense. Alnylam will pay Tekmira milestones and royalties as Alnylam's LNP-enabled products are developed and commercialized.

The new licensing agreement with Alnylam also grants us intellectual property rights to develop our own proprietary RNAi therapeutics. Alnylam has granted us a worldwide license for the discovery, development and commercialization of RNAi products directed to thirteen gene targets – three exclusive and ten non-exclusive licenses – provided that they have not been committed by Alnylam to a third party or are not otherwise unavailable as a result of the exercise of a right of first refusal held by a third party or are part of an ongoing or planned development program of Alnylam. Licenses for five of the ten non-exclusive targets – ApoB, PLK1, Ebola, WEE1, and CSN5 – have already been granted, along with an additional license for ALDH2, which has been granted on an exclusive basis. In consideration for this license, we have agreed to pay single-digit royalties to Alnylam on product sales and have milestone obligations of up to US$8.5 million on the non-exclusive licenses (with the exception of TKM-Ebola, which has no milestone obligations). Alnylam no longer has "opt-in" rights to Tekmira's lead oncology product, TKM-PLK1, so we now hold all development and commercialization rights related TKM-PLK1. We will have no milestone obligations on the three exclusive licenses.

Alnylam currently has three LNP-enabled products in human clinical trials: ALN-TTR, ALN-VSP, and ALN-PCS.

Alnylam's ALN-TTR01 and ALN-TTR02 are RNAi therapeutics targeting transthyretin (TTR) for the treatment of TTR-mediated amyloidosis (ATTR), a systemic disease caused by mutations in the TTR gene. ALN-TTR01 and ALN-TTR02 utilize our LNP technology. In July 2010, Alnylam announced the initiation of a Phase 1 human clinical trial for ALN-TTR01, which triggered a US$0.5 million milestone payment to us. Alnylam also initiated a Phase 1 trial with ALN-TTR02 aimed at evaluating safety, tolerability, and clinical activity of ALN-TTR02. New data were presented on July 16, 2012 at Boston University School of Medicine. Alnylam reported results that showed that administration of ALN-TTR02 resulted in statistically significant reductions in serum TTR protein levels of up to 94%. Suppression of TTR, the disease-causing protein in ATTR, was found to be rapid, dose dependent, durable, and specific after just a single dose. Alnylam has initiated a Phase 2 study of ALN-TTR02 in patients with ATTR and has guided that its goal is to start a Phase 3 clinical trial by the end of 2013. The initiation of the Phase 2 study of ALN-TTR02 triggered a US$1.0 million milestone payment to Tekmira. Tekmira is entitled to receive a US$5 million milestone payment when ALN-TTR02 enters a Phase 3 or pivotal clinical trial, which is expected to occur in 2013. Tekmira will also receive low single digit royalty payments based on commercial sales of ALN-TTR02.

In April 2009, Alnylam announced that they had initiated a Phase 1 human clinical trial for ALN-VSP. ALN-VSP is being developed as a treatment for advanced solid tumors with liver involvement. ALN-VSP comprises siRNA molecules delivered systemically using our LNP technology. The initiation of the ALN-VSP Phase 1 clinical trial triggered a milestone payment of $0.6 million (US$0.5 million) which we received in May 2009. In June 2011, Alnylam presented Phase 1 human clinical trial data at American Society of Clinical Oncology (ASCO) meeting and disclosed that ALN-VSP was generally well tolerated, demonstrated evidence for anti-tumor activity, and was found to mediate RNAi activity in both hepatic and extra-hepatic tumors. The most recent ALN-VSP data were presented at the American Society of Clinical Oncology (ASCO) meeting in June 2012. Alnylam disclosed that, overall, the results demonstrated disease control lasting more than six months in the majority of patients treated on the extension study, including a complete response (CR) in an endometrial cancer patient who had multiple liver metastases. In this study, chronic dosing of up to 23 months with ALN-VSP was found to be generally safe and well tolerated. In July 2012, Alnylam disclosed that it has formed a strategic alliance with Ascletis Pharmaceuticals (Hangzhou) Co., Ltd., a privately held US-China joint venture pharmaceutical company, to develop and commercialize ALN-VSP in China, including Hong Kong, Macau, and Taiwan. Tekmira is entitled to receive a US$5 million milestone payment for enabling ALN-VSP to enter clinical trials in China, which is expected to occur in 2013. Tekmira will also receive low single digit royalty payments based on commercial sales of ALN-VSP.

Alnylam is also developing ALN-PCS, an RNAi therapeutic, which is enabled by our LNP delivery technology, to treat hypercholesterolemia, or high levels of cholesterol in the blood. On September 26, 2011, Alnylam announced the initiation of a Phase 1 human clinical trial for ALN-PCS which triggered a US$0.5 million milestone payment to us. On April 20, 2012, Alnylam presented ALN-PCS data at the American Heart Association's

Arteriosclerosis, Thrombosis, and Vascular Biology (ATVB) 2012 Scientific Sessions held in Chicago, IL. Alnylam reported results that showed that administration of a single dose of ALN-PCS, in the absence of concomitant lipid-lowering agents such as statins, resulted in statistically significant and durable reductions of PCSK9 plasma levels of up to 84% and lowering of low-density lipoprotein cholesterol (LDL-C), or "bad cholesterol," of up to 50%. ALN-PCS was shown to be safe and well tolerated in this study. In February 2013, Alnylam disclosed an exclusive global alliance with The Medicines Company to advance the ALN-PCS program. Tekmira will receive low single digit royalty payments based on commercial sales of ALN-PCS.

The Alnylam license agreement generally ends upon the expiration of the last to expire royalty term, which duration is determined on a product-by-product and country-by-country basis, commencing on the first commercial sale and continuing during any period in which a product sold is covered by a valid claim of a licensed patent granted by one party of the agreement to the other party. We currently expect the expiration date of the last-to-expire royalty term tied to the duration of the Alnylam license agreement to be 2030, subject to the possibility of any patent term adjustment that might be made by a patenting authority. Either party may terminate a license it granted to the other in the event that the other party fails to cure a material breach of its obligations relating to that license. Furthermore, either party may terminate the agreement in the event the other party fails to cure a material breach of an obligation under the agreement. In addition, either party may terminate the agreement upon patent-related challenges by the other party.

License and collaboration agreement with Halo-Bio RNAi Therapeutics, Inc. (Halo-Bio)

On August 24, 2011, we entered into a license and collaboration agreement with Halo-Bio. Under the agreement, Halo-Bio granted to us an exclusive license to its multivalent ribonucleic acid MV-RNA technology. The Agreement allows us to work together with Halo-Bio to design and develop MV-RNA molecules directed at gene targets of interest to us and to combine MV-RNA molecules with our LNP technology to develop therapeutic products. MV-RNA technology comprises single macromolecules capable of mediating RNAi at multiple unique target sites. MV-RNA can target three sites on a single gene or up to three separate genes simultaneously. We have already successfully demonstrated multi-gene knockdown using MV-RNA enabled by our proprietary LNP formulations.

The agreement was amended on August 8, 2012 to adjust the future license fees and other contingent payments. We have recorded $0.5 million in fees under our license from Halo-Bio to the end of 2012. Under the amended agreement, the maximum future license fees and other contingent payments are US$1.3 million and we will pay up to US$12.7 million in milestones on each product developed plus royalties. This license was terminated by Tekmira for convenience effective as of July 31, 2013.

License agreement with Marina Biotech, Inc.

On November 29, 2012, we disclosed that we had obtained a worldwide, non-exclusive license to a novel RNAi payload technology called Unlocked Nucleobase Analog (UNA) from Marina for the development of RNAi therapeutics. UNA technology can be used in the development of RNAi therapeutics, which treat disease by silencing specific disease causing genes. UNAs can be incorporated into RNAi drugs and have the potential to improve them by increasing their stability and reducing off-target effects. Marina will receive an upfront payment plus milestone and royalty payments on products developed by Tekmira that use UNA technology. In December 2012, we paid Marina an up-front license fee of $0.3 million. We expect to pay Marina a further license fee of US$0.2 million in Q2 2013 and there are milestones of up to US$3.2 million plus royalties for each product that we develop using UNA technology licensed from Marina.

Unless terminated earlier, the license grants by Marina expire on a country-by-country basis, upon the earlier of: (i) the expiry of the Royalty Term for each licensed product in such country, or (ii) the end of the calendar quarter in which sales in such country of generics exceed 50% of the sales of licensed product in such country. Royalty Term is defined in the license agreement as a period extending to the later of: (a) the date of the last to expire issued licensed patent having a valid claim covering the licensed product; or (b) 10 years after the date of first commercial sale of a licensed product in a major market (US, UK, France, Germany, Italy, Spain, China or Japan). We anticipate the expiration date of the last-to-expire issued licensed patent to be 2028, subject to the possibility of any patent term adjustment that might be made by a patenting authority. We may terminate the license agreement for convenience, and either party may terminate the license agreement for bankruptcy or for a material breach which

remains uncured. We may cure a default in payment within 60 days following receipt of Marina's notice, or cure any other default within 120 days following receipt of Marina's notice. Marina may cure any default within 120 days following receipt of our notice. If Marina fails to cure a material breach, at our sole option, (i) the licenses granted by Marina will automatically convert into a world-wide, royalty-free, fully paid-up, perpetual license; or (ii) we may terminate the license agreement in its entirety or in respect of any country or countries.

Roche product development and research agreements

On May 30, 2008, we signed an initial research agreement with Roche. This initial research agreement expired at the end of 2008 and was replaced by a research agreement (Roche Research Agreement) dated February 11, 2009. Work under the Roche Research Agreement was completed in the first half of 2009.

On May 11, 2009 we announced a product development agreement with Roche (Roche Product Development Agreement) that provides for product development up to the filing of an IND by Roche. The product development activities under this agreement expand the activities that were formerly covered by the Roche Research Agreement. Under the Roche Product Development Agreement Roche paid for the provision of our staff and for external costs incurred up to US$8.8 million, for us to support the advancement of a Roche RNAi product candidate using our LNP technology through to the filing of an IND application.

On November 17, 2010, Roche announced that, as part of a corporate restructuring, they intend to discontinue research and development in the field of RNAi. Following the announcement, Roche confirmed that, except for completing some product stability studies, they would be discontinuing product development with Tekmira. The stability studies were completed in 2011 so we now have no further obligation to Roche. In October 2011, Arrowhead Research Corporation announced that it had acquired all RNA therapeutics assets and intellectual property from Roche.

Merck license agreement

Protiva, our wholly owned subsidiary, is party to a non-exclusive royalty-bearing world-wide license agreement with Merck. Under the license, Merck will pay up to US$17.0 million in milestones for each product they develop covered by Protiva's intellectual property, except for the first product, for which Merck will pay up to US$15.0 million in milestones, and will pay single-digit royalties on product sales. Merck has also granted a non-exclusive, perpetual, royalty-free license to us, with the right to grant sublicenses, for some of its patents. The license agreement with Merck was entered into as part of the settlement of litigation between Protiva and a Merck subsidiary. The royalty payable by Merck to us will expire upon the expiry of the last valid claim in an issued and unexpired patent within the Protiva Patent Rights or Collaboration Patent Rights. We expect such expiry to be in 2027, subject to the possibility of any patent term adjustment that might be made by a patenting authority. No termination provisions exist in the licenses granted under the Merck agreement.

Bristol-Myers Squibb research agreement

On May 10, 2010 we announced the expansion of our research collaboration with Bristol-Myers Squibb. Under the new agreement, Bristol-Myers Squibb will use siRNA molecules formulated by us in lipid nanoparticles to silence target genes of interest. Bristol-Myers Squibb will conduct the pre-clinical work to validate the function of certain genes and share the data with us. We can use the pre-clinical data to develop RNAi therapeutic products against the therapeutic targets of interest. Bristol-Myers Squibb paid us US$3.0 million concurrent with the signing of the agreement. We are required to provide a pre-determined number of lipid nanoparticle batches over the four-year agreement. Bristol-Myers Squibb will have a first right to negotiate a licensing agreement on certain RNAi products developed by us that evolve from Bristol-Myers Squibb validated gene targets. On May 17, 2011 we announced a further expansion of the collaboration to include broader applications of our LNP technology and additional target validation work.

Unless earlier terminated, the research collaboration with Bristol-Myers Squibb will continue through May 6, 2014. Bristol-Myers Squibb may terminate the agreement at any time with 60 days' prior written notice. Either party may terminate the agreement if the other party undergoes a change of control so long as the terminating party gives the other party or the other party's successor at least 30 days' prior written notice of termination, which notice is given before the 90th day following the change of control. Each party may also terminate the agreement if the other party fails to cure a material breach within 90 days after receipt of a notice of breach from the non-breaching

party; provided however, that if the breach is disputed in good faith, the 90-day cure period will not begin until the earlier of (i) the date such dispute is resolved or can no longer be maintained in good faith, or (ii) the 120th day following the receipt of notice of breach, unless either party has, prior to such 120th day, commenced an arbitration proceeding to resolve such dispute as to the existence of the breach.

USAMRIID research agreement

In 2005 we signed a five-year research agreement with the United States Army Medical Research Institute for Infectious Diseases (USAMRIID) to collaborate on the development of siRNA-based therapy against filovirus infections, including Ebola, using LNPs. In 2010 we received the final payment under this grant. Further development of our TKM-Ebola product is being funded by the U.S. Department of Defense under the Transformational Medical Technologies (TMT) program as discussed in "*TKM-Ebola*" section above.

U.S. National Institutes of Health (NIH) grant

On October 13, 2010 we announced that together with collaborators at The University of Texas Medical Branch (UTMB), we were awarded a new NIH grant to support research to develop RNAi therapeutics to treat Ebola and Marburg hemorrhagic fever viral infections using our LNP delivery technology. The grant, worth US$2.4 million, is supporting work at Tekmira and the UTMB.

Legacy Agreements

Talon Therapeutics, Inc. (Talon, formerly Hana Biosciences, Inc.) license agreement

Talon was developing targeted chemotherapy products under a legacy license agreement entered into in May 2006. Marqibo (Optisomal Vincristine), Alocrest (Optisomal Vinorelbine) and Brakiva (Optisomal Topotecan), products originally developed by us, have been exclusively licensed to Talon. Talon agreed to pay us milestones and single-digit royalties and is responsible for all future development and future expenses. In May 2009, the license agreement with Talon was amended to decrease the size of near-term milestone payments and increase the size of long-term milestone payments. On September 20, 2010, the license agreement with Talon was amended a second time such that Talon paid $5.9 million (US$5.75 million) in consideration for reducing certain future payments associated with the product candidates. The payment of $5.9 million (US$5.75 million) from Talon has been paid to our contingent creditors in full settlement of a contingent obligation. Talon was acquired by Spectrum Pharmaceuticals, Inc. We are now eligible to receive milestone payments from Spectrum of up to US$18.0 million upon achievement of further development and regulatory milestones and, we will also receive single-digit royalties based on product sales. If Spectrum sublicenses any of the product candidates, Tekmira is eligible to receive a percentage of any upfront fees or milestone payments received by Spectrum. Depending on the royalty rates Spectrum receives from its sublicensees, our royalty rate may be lower on product sales by the sublicensees. The royalty rate will be reduced to low single digits if there is generic competition.

Marqibo is a proprietary sphingosomal formulation of the widely used, off-patent cancer chemotherapeutic vincristine. The FDA has granted Spectrum orphan drug and fast track designations for the use of Marqibo in adult acute lymphoblastic leukemia (ALL). In August 2007, Talon initiated a Phase 2 Marqibo registration-enabling clinical trial in relapsed ALL. On July 18, 2011, Talon announced that its New Drug Application (NDA) for Marqibo had been submitted to the FDA seeking approval for the treatment of adult Philadelphia chromosome-negative ALL in second or greater relapse or that has progressed following two or more lines of anti-leukemia therapy. On August 9, 2012, Talon announced that Marqibo® (vincristine sulfate LIPOSOME injection) had received accelerated approval from the U.S. Food and Drug Administration (FDA) for the treatment of adult patients with Philadelphia chromosome negative (Ph-) acute lymphoblastic leukemia (ALL) in second or greater relapse or whose disease has progressed following two or more anti-leukemia therapies. Spectrum is responsible for all future development of Marqibo. In 2012, we received a US$1.0 million milestone payment based on the FDA approval of Marqibo and will receive mid-single digit royalty payments based on Marqibo's commercial sales.

Unless terminated earlier, the license grants made under the license agreement expire on a country-by-country basis upon the later of (i) the expiration of the last to expire patents covering each product in a particular country, (ii) the expiration of the last to expire period of product exclusivity covered by a product under the laws of such

country, or (iii) on the date that all of the licensed Technology ceases to be confidential information of Tekmira. Spectrum has launched Marqibo and we anticipate the expiration date of the last to expire issued patent covering Marqibo to be 2022, subject to the possibility of any patent term adjustment that might be made by a patenting authority. Royalty is also bearing on pending patent applications subject to their issuance, and we anticipate the expiration date of the last to expire patent so issued, to be 2025, subject to the possibility of any patent term adjustment that might be made by a patenting authority.

Either party may terminate the license agreement in the event that the other has materially breached its obligations thereunder and fails to remedy such breach within 90 days following notice by the non-breaching party. If such breach is not cured, then the non-breaching party may, upon 6 months' notice to the breaching party, terminate the license in respect of the products or countries to which the breach relates. Tekmira may also terminate the license if Talon asserts or intends to assert any invalidity challenge on any of the licensed patents. The license agreement also provides that either party may, upon written notice, terminate the agreement in the event of the other's bankruptcy, insolvency, dissolution or similar proceeding. In the event Tekmira validly terminates the license agreement, all data, materials, regulatory filings and all other documentation reverts to Tekmira.

Aradigm Corporation license agreement

In December 2004, we entered into a licensing agreement with Aradigm under which Aradigm exclusively licensed certain of our liposomal intellectual property for the pulmonary delivery of Ciprofloxacin. As amended, this agreement calls for milestone payments totalling US$4.5 and US$4.75 million, respectively, for the first two disease indications pursued by Aradigm using our technology, and for low- to mid-single-digit royalties on sales revenue from products using our technology. Aradigm has asserted that it is not using our technology in its current products. The parties mutually agreed to terminate the license effective May 9, 2013; provided however, that Tekmira retains the right to seek damages if Aradigm breaches one or more representations and warranties contained in the Letter of Termination, relating to Aradigm, its affiliates or sublicensees (i) receiving any milestones or net sales so as to trigger payment obligations under the license agreement; (ii) creating any intellectual property rights arising from the development of licensed product that would entitle Tekmira to such intellectual property rights; or (iii) using any licensed patents or licensed know-how for the research, development, manufacture or commercialization of any product or technology.

University of British Columbia

Certain early work on lipid nanoparticle delivery systems and related inventions was undertaken at the University of British Columbia (UBC). These inventions are licensed to us by UBC under a license agreement, initially entered in 1998 and thereafter restated and amended. This agreement calls for revenue sharing on payments received from sublicenses that range from 10% for intellectual property related to certain technology used for the delivery of oligonucleotides and up to approximately 20% for intellectual property covering certain legacy product candidates being advanced by Talon and Aradigm. The agreement calls for single-digit royalties on product sales made by us under the licensed patents. The patents licensed to us by UBC under this license agreement have been expanded over the years to include patents, if any, on additional inventions discovered by UBC and us in our prior collaborations with UBC or otherwise in the course of our prior collaboration with Alnylam. These collaborations with UBC and with Alnylam ended at the end of 2008. We have granted sublicenses under the UBC license to Alnylam as well as to Talon and Aradigm. While Alnylam's sublicense is exclusive in the RNAi field, Alnylam has in turn sublicensed us under the licensed UBC patents for discovery, development and commercialization of RNAi products. Unless earlier terminated, the agreement between UBC and Tekmira will expire upon the later of (i) July 1, 2018 or (ii) the expiration, on a country-by-country basis, of the last claim of any licensed issued patent or licensed pending patent that has been pending less than 6 years from its filing date.

Tekmira may terminate this license for convenience. This license terminates automatically without notice if Tekmira undergoes bankruptcy or insolvency, except for involuntary bankruptcy or insolvency proceedings, in which case Tekmira will have 60 days to have the proceedings against it discharged to avoid termination. UBC may terminate this license with notice, with immediate effect, if Tekmira grants any sublicense without the prior written consent of UBC, notifies UBC that Tekmira will cease pursuing all patent protection for the licensed technology, or fails to cure within 60 days of UBC's notice to Tekmira, a material breach of a sublicense by Tekmira's sublicensee, which if committed by Tekmira would constitute a breach of the UBC license. Other than

the foregoing termination rights, either party may terminate this license upon the other party's failure to cure any breach within 90 days after receipt of written notice of breach.

In mid-2009, we and our subsidiary Protiva entered into a supplemental agreement with UBC, Alnylam and AlCana Technologies, Inc., in relation to a separate research collaboration to be conducted among UBC, Alnylam and AlCana. We are licensed under the supplemental agreement to inventions discovered from this collaboration. Notwithstanding the termination of the supplemental agreement on November 12, 2012, Tekmira and Protiva continue to receive a milestone and royalty-bearing license from UBC to inventions discovered prior to termination of this agreement. Payment obligations cease upon the expiration, on a country-by-country basis, of the last claim of any licensed issued patent or licensed pending patent that has been pending less than 5 years from its filing date.

To the best of Tekmira's knowledge and belief, as of the date of writing, there are no patents in the current portfolio of patents in-licensed from UBC that cover any products in development of Tekmira or its sublicensees. However, if any patent were to cover a pipeline product, we anticipate the expiration date of the last to expire issued patent to be 2021. Royalty is also bearing on pending patent applications subject to their issuance, and we anticipate the expiration date of the last to expire patent so issued, to be 2029. The above dates are subject to the possibility of any patent term adjustment that might be made by a patenting authority.

Patents and Proprietary Rights

In addition to the expertise we have developed and maintain in confidence, we own a portfolio of patents and patent applications directed to LNP inventions, the formulation and manufacture of LNP-based pharmaceuticals, chemical modification of RNAi molecules, and RNAi drugs and processes directed at particular disease indications.

We have filed many patent applications with the European Patent Office that have been granted. In Europe, upon grant, a period of nine months is allowed for notification of opposition to such granted patents. If our patents are subjected to interference or opposition proceedings, we would incur significant costs to defend them. Further, our failure to prevail in any such proceedings could limit the patent protection available to our RNAi platform, including our product candidates.

Tekmira has a portfolio of approximately 95 patent families, in the U.S. and abroad, that are directed to various aspects of LNPs and LNP formulations. The portfolio includes approximately 72 issued U.S. patents, approximately 71 issued non-U.S. patents, and approximately 229 pending patent applications, including the following patents and applications in the United States and Europe[(1)]:

Invention Category	Title	Priority Filing Date*	Status**	Expiration Date***
LNP	Lipid Encapsulated Interfering RNA	07/16/2003	U.S. Pat. No.7,982,027; application pending in Europe	07/16/2024
LNP	Lipid Encapsulated Interfering RNA	06/07/2004	U.S. Pat. No. 7,799,565; European Pat. No.1766035	06/07/2025
LNP	Novel Lipid Formulations for Nucleic Acid Delivery	04/15/2008	U.S. Pat. No. 8,058,069; application pending in Europe	04/15/2029
LNP	Novel Lipid Formulations for Delivery of Therapeutic Agents to Solid Tumors	07/01/2009	U.S. Pat. No.8,283,333 Applications pending in U.S. and Europe	06/30/2030

Invention Category	Title	Priority Filing Date*	Status**	Expiration Date***
LNP Manufacturing	Liposomal Apparatus and Manufacturing Methods	06/28/2002	U.S. Pat. No. 7,901,708; European Pat. No. 1519714	06/28/2023
LNP Manufacturing	Systems and Methods for Manufacturing Liposomes	07/27/2005	Application pending in U.S. and Europe	07/27/2026
Novel Lipids	Cationic Lipids and Methods of Use	06/07/2004	U.S. Pat. No. 7,745,651; European Pat. No. 1781593	06/07/2025
Novel Lipids	Polyethyleneglycol-Modified Lipid Compounds and Uses Thereof	09/15/2003	U.S. Pat. No. 7,803,397; European Pat. No. 1664316	09/15/2024
Novel Lipids	Improved Cationic Lipids and Methods for the Delivery of Therapeutic Agents	07/01/2009	Application pending in the U.S.	06/30/2030
Chemical Modifications	Modified siRNA Molecules and Uses Thereof	11/02/2005	U.S. Pat. Nos. 8,101,741 and 8,188,263; applications pending in Europe and U.S.	11/02/2026
Chemical Modifications	Modified siRNA Molecules and Uses Thereof	06/09/2006	U.S. Pat. No. 7,915,399	06/08/2027
Therapeutic Target	siRNA Silencing of Apolipoprotein B	11/17/2004	Applications pending in U.S. and Europe	11/17/2025
Therapeutic Target	Compositions and Methods for Silencing Apolipoprotein B	07/01/2009	U.S. Pat. No. 8,236,943 Application pending in Europe	06/30/2030
Therapeutic Target	siRNA Silencing of Filovirus Gene Expression	10/20/2005	U.S. Pat. No. 7,838,658	10/20/2026
Therapeutic Target	Compositions and Methods for Silencing Ebola Virus Gene Expression	07/20/2009	Application pending in U.S.	07/20/2030
Therapeutic Target	Silencing of Polo-Like Kinase Expression using Interfering RNA	12/27/2007	Applications pending in U.S. and Europe	12/27/2028

(1) Patent information current as of December 31, 2012.

* Priority filing dates are based on the filing dates of provisional patent applications. Provisional applications expire unless they are converted to non-provisional applications within one year.

** An “allowed” patent application is an active case that has been found by the patent office to contain patentable subject matter, subject to the payment of issue/grant fees by the applicant.

*** Once issued, the term of a US patent first filed after mid-1995 generally extends until the 20th anniversary of the filing date of the first non-provisional application to which such patent claims priority. It is important to note, however, that the United States Patent & Trademark Office, or USPTO, sometimes requires the filing of a Terminal Disclaimer during prosecution, which may shorten the term of the patent. On the other hand, certain patent term adjustments may be available based on USPTO delays during prosecution. Similarly, in the pharmaceutical area, certain patent term extensions may be available based on the history of the drug in clinical trials. We cannot predict whether or not any such adjustments or extensions will be available or the length of any such adjustments or extensions.

PART III

ITEM 19 EXHIBITS

The following exhibits are included in this Annual Report

Exhibit Number	Description
1.1*	Notice of Articles and Articles of the Company (incorporated herein by reference to Exhibit 1.1 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
2.1*	Subscription Agreement, between the Company and Alnylam Pharmaceuticals, Inc., dated March 28, 2008 (incorporated herein by reference to Exhibit 2.1 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
2.2*	Subscription Agreement, between the Company and Roche Finance Ltd., dated March 31, 2008 (incorporated herein by reference to Exhibit 2.2 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.1†*	Amendment No. 1 to the Amended and Restated Agreement, between the Company (formerly Inex Pharmaceuticals Corporation) and Hana Biosciences, Inc., effective as of May 27, 2009 (incorporated herein by reference to Exhibit 4.1 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.2†*	Amended and Restated License Agreement, between Inex Pharmaceuticals Corporation and Hana Biosciences, Inc, dated April 30, 2007 (incorporated herein by reference to Exhibit 4.2 to the Registrant's Amendment No. 1 to Form 20-F for the year ended December 31, 2010 filed with the SEC on January 31, 2012).
4.3†*	Sublicense Agreement, between Inex Pharmaceuticals Corporation and Alnylam Pharmaceuticals, Inc., dated January 8, 2007 (incorporated herein by reference to Exhibit 4.3 to the Registrant's Amendment No. 1 to Form 20-F for the year ended December 31, 2010 filed with the SEC on January 31, 2012).
4.4†*	Amended and Restated License and Collaboration Agreement, between the Company and Alnylam Pharmaceuticals, Inc., effective as of May 30, 2008 (incorporated herein by reference to Exhibit 4.4 to the Registrant's Amendment No. 1 to Form 20-F for the year ended December 31, 2010 filed with the SEC on January 31, 2012).
4.5†*	Amended and Restated Cross-License Agreement, between Alnylam Pharmaceuticals, Inc. and Protiva Biotherapeutics Inc., dated May 30, 2008 (incorporated herein by reference to Exhibit 4.5 to the Registrant's Amendment No. 1 to Form 20-F for the year ended December 31, 2010 filed with the SEC on January 31, 2012).
4.6†*	License Agreement, between Inex Pharmaceuticals and Aradigm Corporation, dated December 8, 2004 (incorporated herein by reference to Exhibit 4.6 to the Registrant's Amendment No. 1 to Form 20-F for the year ended December 31, 2010 filed with the SEC on January 31, 2012).
4.7†*	Settlement Agreement, between Sirna Therapeutics, Inc. and Merck & Co., Inc. and Protiva Biotherapeutics Inc. and Protiva Biotherapeutics (USA), Inc., effective as of October 9, 2007 (incorporated herein by reference to Exhibit 4.7 to the Registrant's Amendment No. 1 to Form 20-F for the year ended December 31, 2010 filed with the SEC on January 31, 2012).
4.8†*	Development, Manufacturing and Supply Agreement, between the Company and Alnylam Pharmaceuticals, Inc., dated January 2, 2009 (incorporated herein by reference to Exhibit 4.8 to the Registrant's Amendment No. 1 to Form 20-F for the year ended December 31, 2010 filed with the SEC on January 31, 2012).
4.9†*	Executive Employment Agreement with Ian Mortimer, dated March 26, 2008 (incorporated herein by reference to Exhibit 4.9 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).

Exhibit Number	Description
4.10*	Executive Employment Agreement with Ian MacLachlan, dated May 30, 2008 (incorporated herein by reference to Exhibit 4.10 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.11*	Executive Employment Agreement with Mark Murray, dated May 30, 2008 (incorporated herein by reference to Exhibit 4.11 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.12*	Executive Employment Agreement with Peter Lutwyche, dated January 1, 2009 (incorporated herein by reference to Exhibit 4.12 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.13*	Share Option Plan amended through May 12, 2009 (including form stock option agreements) (incorporated herein by reference to Exhibit 4.13 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.14*	Lease Agreement with Canada Lands Company CLC Limited dated December 15, 1997, as amended (incorporated herein by reference to Exhibit 4.14 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.15*	Form of Indemnity Agreement (incorporated herein by reference to Exhibit 4.15 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.16*	Award Contract with USASMDC/ARSTRAT effective date July 14, 2010 (incorporated herein by reference to Exhibit 4.16 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.17†*	License Agreement between the University of British Columbia and Inex Pharmaceuticals Corporation executed on July 30, 2001 (incorporated herein by reference to Exhibit 4.17 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.18†*	Amendment Agreement between the University of British Columbia and Inex Pharmaceuticals Corporation dated July 11, 2006 (incorporated herein by reference to Exhibit 4.18 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.19†*	Second Amendment Agreement between the University of British Columbia and Inex Pharmaceuticals Corporation dated January 8, 2007 (incorporated herein by reference to Exhibit 4.19 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.20†*	Consent Agreement of the University of British Columbia to Inex/Alnylam Sublicense Agreement dated January 8, 2007 (incorporated herein by reference to Exhibit 4.20 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.21†*	Amendment No. 2 to the Amended and Restated Agreement, between the Company (formerly Inex Pharmaceuticals Corporation) and Hana Biosciences, Inc., effective as of September 20, 2010 (incorporated herein by reference to Exhibit 4.21 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.22†*	License and Collaboration Agreement between the Company and Halo-Bio RNAi Therapeutics, Inc. as of August 24, 2011 (incorporated herein by reference to Exhibit 4.22 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).

Exhibit Number	Description
4.23*	Loan Agreement with Silicon Valley Bank dated as of December 21, 2011 (incorporated herein by reference to Exhibit 4.23 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).
4.24*	Employment Agreement with Paul Brennan dated August 24, 2010 (incorporated herein by reference to Exhibit 4.24 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).
4.25*	Tekmira 2011 Omnibus Share Compensation Plan approved by shareholders on June 22, 2011 (incorporated herein by reference to Exhibit 4.25 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).
4.26††*	Settlement Agreement and General Release, by and among Tekmira Pharmaceuticals Corporation, Protiva Biotherapeutics Inc., Alnylam Pharmaceuticals, Inc., and AlCana Technologies, Inc., dated November 12, 2012
4.27††*	Cross-License Agreement by and among Alnylam Pharmaceuticals, Inc., Tekmira Pharmaceuticals Corporation and Protiva Biotherapeutics Inc., dated November 12, 2012
4.28††**	License Agreement by and among Protiva Biotherapeutics Inc. and Marina Biotech, Inc. dated November 28, 2012
4.29*	Employment Agreement with Diane Gardiner dated March 1, 2013
8.1*	List of Subsidiaries (incorporated herein by reference to Exhibit 8.1 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
12.1**	Certification of Chief Executive Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2**	Certification of Chief Financial Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
13.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
15.1*	Consent of KPMG LLP
101*	Interactive Data Files

* Previously filed.
** Filed herewith.
† Confidential treatment granted as to portions of this exhibit.
†† Confidential treatment has been requested as to portions of this exhibit.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

TEKMIRA PHARMACEUTICALS CORPORATION

/s/ Mark J. Murray
Mark J. Murray
President and Chief Executive Officer

Date: October 29, 2013

EXHIBIT INDEX

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4.17†*	License Agreement between the University of British Columbia and Inex Pharmaceuticals Corporation executed on July 30, 2001 (incorporated herein by reference to Exhibit 4.17 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.18†*	Amendment Agreement between the University of British Columbia and Inex Pharmaceuticals Corporation dated July 11, 2006 (incorporated herein by reference to Exhibit 4.18 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.19†*	Second Amendment Agreement between the University of British Columbia and Inex Pharmaceuticals Corporation dated January 8, 2007 (incorporated herein by reference to Exhibit 4.19 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.20†*	Consent Agreement of the University of British Columbia to Inex/Alnylam Sublicense Agreement dated January 8, 2007 (incorporated herein by reference to Exhibit 4.20 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.21†*	Amendment No. 2 to the Amended and Restated Agreement, between the Company (formerly Inex Pharmaceuticals Corporation) and Hana Biosciences, Inc., effective as of September 20, 2010 (incorporated herein by reference to Exhibit 4.21 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
4.22†*	License and Collaboration Agreement between the Company and Halo-Bio RNAi Therapeutics, Inc. as of August 24, 2011 (incorporated herein by reference to Exhibit 4.22 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).
4.23*	Loan Agreement with Silicon Valley Bank dated as of December 21, 2011 (incorporated herein by reference to Exhibit 4.23 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).
4.24*	Employment Agreement with Paul Brennan dated August 24, 2010 (incorporated herein by reference to Exhibit 4.24 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).
4.25*	Tekmira 2011 Omnibus Share Compensation Plan approved by shareholders on June 22, 2011 (incorporated herein by reference to Exhibit 4.25 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2011 filed with the SEC on March 27, 2012).
4.26††*	Settlement Agreement and General Release, by and among Tekmira Pharmaceuticals Corporation, Protiva Biotherapeutics Inc., Alnylam Pharmaceuticals, Inc., and AlCana Technologies, Inc., dated November 12, 2012
4.27††*	Cross-License Agreement by and among Alnylam Pharmaceuticals, Inc., Tekmira Pharmaceuticals Corporation and Protiva Biotherapeutics Inc., dated November 12, 2012
4.28††**	License Agreement by and among Protiva Biotherapeutics Inc. and Marina Biotech, Inc. dated November 28, 2012
4.29*	Employment Agreement with Diane Gardiner dated March 1, 2013
8.1*	List of Subsidiaries (incorporated herein by reference to Exhibit 8.1 to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2010 filed with the SEC on June 3, 2011).
12.1**	Certification of Chief Executive Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2**	Certification of Chief Financial Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
13.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
15.1*	Consent of KPMG LLP
101*	Interactive Data Files

* Previously filed.
** Filed herewith.
† Confidential treatment granted as to portions of this exhibit.
†† Confidential treatment has been requested as to portions of this exhibit.

Exhibit 4.28 as filed with 20-F

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [**]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

Exhibit 4.28

EXECUTION COPY

LICENSE AGREEMENT

By and Between

PROTIVA BIOTHERAPEUTICS INC.

And

MARINA BIOTECH, Inc.

TABLE OF CONTENTS

LICENSE AGREEMENT

This LICENSE AGREEMENT ("**Agreement**") is made as of this 28th day of November, 2012 ("**Effective Date**"), by and between **PROTIVA BIOTHERAPEUTICS INC.**, a British Columbia corporation ("**PROTIVA**"), and **MARINA BIOTECH, INC.**, a Delaware corporation ("**MARINA**"). PROTIVA and MARINA are each referred to individually as a "**Party**" and together as the "**Parties**."

RECITALS

WHEREAS, MARINA has developed a proprietary platform for creating novel oligonucleotide therapeutics and owns or Controls (as defined below) certain intellectual property relating thereto; and

WHEREAS, PROTIVA wishes to obtain, and MARINA wishes to grant, a license to such intellectual property on the terms and conditions set forth herein;

NOW THEREFORE, in consideration of the mutual covenants and agreements herein contained, the Parties agree as follows.

Article 1 DEFINITIONS AND INTERPRETATION

1.1 Definitions.

Unless the context otherwise requires, the terms in this Agreement with initial letters capitalized, shall have the meanings set forth below, or the meaning as designated in the indicated places throughout this Agreement.

(a) "**Affiliate**" means, with respect to a Person, any other Person that controls, is controlled by, or is under common control with that Person. For the purpose of this definition, "control" shall mean direct or indirect ownership of fifty percent (50%) or more of the shares of stock entitled to vote for the election of directors, in the case of a corporation, or fifty percent (50%) or more of the equity interest in the case of any other type of legal entity, status as a general partner in any partnership, or any other arrangement whereby the entity or person controls or has the right to control the board of directors or equivalent governing body of a corporation or other entity, or the ability to cause the direction of the management or policies of a corporation or other entity. In the case of entities organized under the laws of certain countries, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and in such case such lower percentage shall be substituted in the preceding sentence, *provided*, that such foreign investor has the power to direct the management and policies of such entity.

(b) "**Agreement**" shall have the meaning set forth in the preamble.

(c) "**Applicable Law**" means all applicable laws, rules, ordinances, and regulations, including any rules, regulations, guidelines or other requirements of relevant government agencies, that may be in effect from time to time in the applicable country or jurisdiction, applicable to the specific activities being undertaken pursuant to this Agreement.

(d) "**Business Day**" means any day that is not a Saturday, a Sunday, or other day which is a statutory holiday in the Province of British Columbia, Canada or a Federal holiday in the State of Washington, U.S.A.

(e) "**Calendar Quarter**" means the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31.

(f) "**Calendar Year**" means each successive period of twelve (12) months commencing on January 1 and ending on December 31.

(g) "**Claims**" means all Third Party demands, claims, actions, proceedings and liabilities (whether criminal or civil, in contract, tort or otherwise) for losses, damages, reasonable legal costs and other reasonable expenses of any nature whatsoever.

(h) "**Combination Product**" means a single Product or a co-packaged Product in dosage form that includes one or more UNAs and one or more Other APIs. All reference to Product in this Agreement shall be deemed to include Combination Products, to the extent applicable.

(i) "**Commercialize**" or "**Commercialization**" means those activities comprising or relating to the manufacturing, promotion, marketing, advertising, distribution and sale of PROTIVA Products, including Phase IV trials or equivalent clinical trials conducted following Regulatory Approval as needed or useful to promote and market the Licensed Product and/or maintain such Regulatory Approval.

(j) "**Commercially Reasonable Efforts**" means, with respect to particular tasks or activities hereunder in developing or Commercializing a PROTIVA Product, a level of efforts applied to such tasks or activities reasonably consistent with the efforts commonly used by similarly-situated companies in the pharmaceutical industry (taking into account, among other things, the size, available resources, available funding, product lines and other relevant characteristics of such companies) to conduct such activities on products at a similar (as compared to the PROTIVA Product at the applicable time) stage in its product life and of similar market potential, profit potential and strategic value resulting from its own research efforts, based on information and conditions then-prevailing, including, without limitation, efficacy of the product, the competitiveness of alternative products in the marketplace, the patent and other proprietary position of the product, the likelihood of regulatory approval given the regulatory structure involved and the likelihood of adequate reimbursement. Commercially Reasonable Efforts shall be determined on a country by country or market-by-market basis (as most applicable) for a particular PROTIVA Product, and it is anticipated that the level of effort will change over time reflecting changes in the status of the PROTIVA Product and the country (or markets) involved.

(k) "**Confidential Information**" means all Know-How and other confidential and/or proprietary information and data of a financial, commercial, scientific or technical nature owned or Controlled by a disclosing Party or entrusted to a disclosing Party by a Third Party with the right to disclose, and which the disclosing Party or any of its Affiliates has supplied or otherwise made available to the other Party or its Affiliates, whether made available orally, in writing or in electronic form, including information comprising or relating to concepts, discoveries, inventions, data, designs or formulae in relation to this

Agreement. For purposes hereof, this Agreement and the terms hereof shall be deemed to be the Confidential Information of both Parties, subject to the rights of disclosure set forth in Article 8 and Subsections 12.2(b) and 12.2(c).

(l) "**Control**" or "**Controlled**" means, with respect to any Know How, Patents, other Intellectual Property Rights, or any confidential, proprietary or trade secret information, the legal authority or right (whether by ownership, license or otherwise) of a Party to grant a license or a sublicense of or under such Know How, Patents, or Intellectual Property Rights to another Person, or to otherwise disclose such proprietary or trade secret information to another Person, without breaching the terms of any agreement with a Third Party, or misappropriating the proprietary or trade secret information of a Third Party.

(m) "**Effective Date**" shall have the meaning set forth in the first paragraph of this Agreement.

(n) "**Feasibility Studies**" shall have the meaning set forth in Section 4.1(b).

(o) "**Field**" shall mean all uses and purposes for the development of human therapeutics.

(p) "**First Commercial Sale**" means, with respect to a particular country, the first commercial sale of a PROTIVA Product in a country by PROTIVA or its Affiliates to a Third Party or by a Sublicensee or its Affiliates to an unaffiliated Person, after all needed Regulatory Approvals for the Licensed Product have been granted in such country.

(q) "**Generic Product**" means, with respect to a PROTIVA Product, a generic product in a formulation similar to and substitutable for such PROTIVA Product.

(r) "**Indemnification Claim Notice**" shall have the meaning set forth in Subsection 11.3(b).

(s) "**Indemnified Party**" shall have the meaning set forth in Subsection 11.3(b).

(t) "**Indemnifying Party**" shall have the meaning set forth in Subsection 11.3(b).

(u) "**Intellectual Property Rights**" means all intellectual property rights subject to protection by intellectual property laws in any country of the world, arising under statutory or common law, contract, or otherwise, and whether or not perfected, including without limitation:

(i) all rights under Patents;

(ii) all rights associated with works of authorship including without limitation, copyrights, moral rights, copyright applications, copyright registrations, synchronization rights, mask work rights, mask work applications, mask work registrations;

(iii) all rights relating to the protection of trade secrets, know-how (including Know-How) and confidential information (including Confidential Information); and

(iv) all rights analogous to those set forth in this subsection above and any and all other proprietary rights relating to intangible property

(v) "**Invention**" means all discoveries, inventions, developments, improvements, Know-How, writings or rights conceived, discovered, invented, developed, created, made or reduced to practice.

(w) "**Joint IP**" shall have the meaning set forth in Subsection 6.1(b).

(x) "**Know-How**" means all technical information, know-how and data, including inventions (whether patentable or not), discoveries, trade secrets, specifications, instructions, processes, formulae, materials, expertise and other technology applicable to compounds, biologics, formulations, compositions, products or to their manufacture, development, registration, use or commercialization or methods of assaying or testing them or processes for their manufacture, formulations containing them, compositions incorporating or comprising them and including all biological, chemical, pharmacological, biochemical, toxicological, pharmaceutical, physical and analytical, safety, quality control, manufacturing, preclinical and clinical data, instructions, processes, formulae, expertise and information, regulatory filings and copies thereof, relevant to the development, manufacture, use or commercialization of and/or which may be useful in studying, testing, development, production or formulation of products, or intermediates for the synthesis thereof.

(y) "**License Fee**" shall have the meaning set forth at Section 4.1(c).

(z) "**MAA**" (marketing authorizing application) means an application for the authorization to market a Product in any country or group of countries outside the United States, as defined in the applicable laws and regulations and filed with the Regulatory Authority of a given country or group of countries.

(aa) "**Major Market**" means [**]. For clarity, obtaining Regulatory Approval of PROTIVA Product from [**], which approval applies [**] (as then constituted), shall be deemed to be obtaining a Regulatory Approval in a Major Market for purposes of the applicable provisions of this Agreement.

(bb) "**MARINA Indemnitees**" shall have the meaning set forth in Section 11.2.

(cc) "**MARINA Inventions**" shall have the meaning set forth in Subsection 6.1(a).

(dd) "**MARINA Know-How**" means the Know-How owned or Controlled by MARINA or its Affiliates on and after the Effective Date relating to the UNA® Platform Technology. The MARINA Know-How shall also include the UNA® Data.

(ee) "**MARINA Patents**" means the Patents identified in Exhibit A and any other Patents owned or Controlled by MARINA or its Affiliates on or after the Effective Date that have claims covering any aspect of the UNA Platform Technology, including Patents arising from MARINA Inventions.

(ff) "**MARINA Technology**" means MARINA Patents and MARINA Know-How and MARINA Inventions.

(gg) "**Milestone Event**" shall have the meaning set forth in Section 4.2.

(hh) "**NDA**" means a New Drug Application, as defined in 21 C.F.R. 314, and any other appropriate application or registration submitted to the appropriate Regulatory Authority

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[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

in a particular country in the Territory to seek Regulatory Approval for sale of Licensed Product in such country.

(ii) "**Net Sales**" means the gross invoice price of Product sold by PROTIVA or its Affiliates to the first Third Party (or by a Sublicensee or its Affiliates to a non-affiliated Person in any arm's length transaction) after deducting, if not previously deducted, from the amount invoiced or received:

(i) trade and quantity discounts other than early pay cash discounts;

(ii) returns, rebates, chargebacks and other allowances;

(iii) retroactive price reductions that are actually allowed or granted;

(iv) sales commissions paid to Third Party distributors and/or selling agents (which shall not be deemed to include contract sales organizations); and

(v) bad debt, sales or excise taxes, early payment cash discounts, transportation and insurance, custom duties, and other governmental charges.

For clarity, Net Sales shall not include funds:

(vi) derived from the transfer or sale of Product between any of PROTIVA and its Affiliates (or between any Sublicensee and its Affiliates);

(vii) derived from the transfer or sale of Product by PROTIVA or its Affiliates to a Third Party (or by a Sublicensee or its Affiliates to a non-affiliated Person) for the development or analytical, preclinical or clinical testing of a Product;

(viii) derived from the transfer or sale of reasonable quantities of Product by PROTIVA or its Affiliates to a Third Party (or by a Sublicensee or its Affiliates to a non-affiliated Person) for samples, donations or compassionate use; and

(ix) constituting Sublicensing Revenue.

Any Product sold in other than in an arm's length transaction or for other property (e.g., barter) shall be deemed invoiced at its fair market value. The calculation of Net Sales of any Combination Product shall, subject to the exclusions set forth above and be calculated using one of the following methods:

(x) by multiplying the annual Net Sales of the Combination Product during the applicable royalty accounting period by a fraction, the numerator of which is the aggregate gross selling price of the Product contained in the Combination Product if sold separately, and the denominator of which is the sum of the gross selling price of both the Product and the Other API(s) contained in the Combination Product if sold separately; or

(xi) if no such separate sales are made of any of the Product or the Other APIs during the applicable accounting period, or if any of the Product or the Other APIs have not been sold separately for at least one (1) year, PROTIVA shall calculate Net Sales of such Combination Product by the fraction C/C+D, where C is a reasonable estimate of the fair market value of the Product portion of such Combination Product, D is a reasonable estimate of the fair market value of the

Other API(s) in such Combination Product, and the estimates of C and D are determined by mutual agreement of the Parties negotiating in good faith.

(jj) "**Other API**" means an active, proprietary pharmaceutical ingredient that is not an UNA and that, if administered independently, would have a clinical effect.

(kk) "**Party**" shall have the meaning set forth in the preamble.

(ll) "**Patents**" means all patents and patent applications, author certificates, inventor certificates, utility certificates, improvement patents and models and certificates of addition and all foreign counterparts of them and including all divisionals, continuations, substitutions, confirmations, continuations-in-part, re-registrations, re-examinations, reissues, additions, renewals, extensions, registrations, and supplemental protection certificates and the like of any of the foregoing.

(mm) "**Person**" means any individual, partnership, limited liability company, firm, corporation, association, trust, unincorporated organization or other entity.

(nn) "**Product**" means any product or process covered by a claim in a MARINA Patent or otherwise utilizing or incorporating MARINA Know-How.

(oo) "**PROTIVA Indemnitees**" shall have the meaning set forth in Section 11.1.

(pp) "**PROTIVA Product**" shall have the meaning set forth in Section 2.2.

(qq) "**Regulatory Approval**" means all approvals (including supplements, amendments, pre- and post-approvals and price approvals), licenses, registrations or authorizations necessary for the manufacture, distribution, use or sale of a Licensed Product in the applicable country or regulatory jurisdiction.

(rr) "**Regulatory Authority**" means any governmental agency or authority responsible for granting Regulatory Approvals for Products, including the United States Food and Drug Administration, the European Medicines Agency, or any successor entities thereto and any corresponding national or regional regulatory authorities.

(ss) "**Regulatory Filings**" means any submission to a Regulatory Authority of any appropriate regulatory application, and shall include, without limitation, any submission to a regulatory advisory board, MAA, and any supplement or amendment thereto. For the avoidance of doubt, Regulatory Filings shall include any Investigational New Drug (IND), New Drug Application (NDA) or the corresponding application in any other country or group of countries.

(tt) "**Royalties Report**" shall have the meaning set forth in Section 4.6.

(uu) "**Royalty Term**" means, as to a particular PROTIVA Product sold in a country, the period from the date of First Commercial Sale of such PROTIVA Product in such country until the later of:

(i) the date of expiration of the last to expire issued Patent included in the MARINA Patents having a Valid Claim that claims the PROTIVA Product in such country; or

(ii) ten (10) years after such First Commercial Sale of the Licensed Product in a Major Market.

(vv) "**Sublicensee**" means a Person to whom PROTIVA or its Affiliate has granted a sublicense agreement under PROTIVA's rights pursuant to Section 2.2.

(ww) "**Sublicense Fees**" shall have the meaning set forth in Section 4.5.

(xx) "**Sublicensing Revenue**" means all consideration received by PROTIVA (or its Affiliates) from a Sublicensee in consideration of the grant of a sublicense under the MARINA Patents to such Sublicensee (which may include upfront fees, milestone payments and other similar fees), but excluding:

(i) royalties payable to PROTIVA (or its Affiliates) based on Net Sales by a Sublicensee or its Affiliates;

(ii) any amounts paid as reimbursement of research or development costs and expenses incurred by PROTIVA or its Affiliates (including past and ongoing costs and expenses) relating to PROTIVA Products;

(iii) direct reimbursement of Patent prosecution or enforcement costs;

(iv) payments of a share of amounts recovered in enforcing Patent or other Intellectual Property Rights (except to the extent such share is calculated or treated as royalties under the terms of such sublicense);

(v) transfer price payments for sale of compounds or products (such exclusion not to exceed [**] of actual fully-burdened cost of goods);

(vi) bona fide loans on commercial terms; and

(vii) any payments made to purchase equity in PROTIVA or a PROTIVA Affiliate at fair market value.

(yy) "**Term**" means the term of this Agreement as set forth in Section 9.1.

(zz) "**Territory**" means all countries of the world.

(aaa) "**Third Party**" means any Person other than a Party or an Affiliate of a Party.

(bbb) "**Third Party Claim**" means any claim, action, allegation, suit or legal proceeding brought by a Third Party against another entity or person.

(ccc) "**UNA**" means an unlocked nucleobase analog.

(ddd) "**UNA Data**" means all data and information owned or Controlled by MARINA relating to the structure, activity and/or other characteristics of the UNA Platform Technology.

(eee) "**UNA Platform Technology**" means the technology for the development, production and use of UNAs and compounds containing one or more UNAs, including, without limitation, Know-How relating to the manufacture, formulation, ingredients, preparation, presentation, means of delivery, dosage or packaging of such UNAs, all as in existence as of the Effective Date.

(fff) "**United States**" or "**US**" means the United States of America, its territories and possessions.

(ggg) **"Upfront Payment"** shall have the meaning set forth in Subsection 4.1(a).

(hhh) "**USD**" or "**US$**" means the lawful currency of the United States.

[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(iii) "**Valid Claim**" means an unexpired claim of an issued Patent within the MARINA Patents that has not been ruled to be unpatentable, invalid or unenforceable by a court or other authority in the country of the Patent with competent jurisdiction, from which decision no appeal is taken or can be taken.

1.2 Interpretation.

In this agreement unless otherwise specified:

(a) "includes" and "including" shall mean respectively includes and including without limitation;

(b) a Party includes its permitted assignees and/or their respective permitted successors in title to substantially the whole of its undertaking;

(c) a statute or statutory instrument or any of their provisions is to be construed as a reference to that statute or statutory instrument or such provision as the same may have been or may from time to time hereafter be amended or re-enacted;

(d) words denoting the singular shall include the plural and vice versa and words denoting any gender shall include all genders;

(e) the Exhibits and other attachments form part of the operative provision of this Agreement and references to this Agreement shall, unless the context otherwise requires, include references to the Exhibits and attachments;

(f) the headings in this Agreement are for information only and shall not be considered in the interpretation of this Agreement;

(g) general words shall not be given a restrictive interpretation by reason of their being preceded or followed by words indicating a particular class of acts, matters or things; and

(h) the Parties agree that the terms and conditions of this Agreement are the result of negotiations between the Parties and that this Agreement shall not be construed in favor of or against any Party by reason of the extent to which any Party participated in the preparation of this Agreement.

Article 2 LICENSES

2.1 License Grant.

Subject to the terms and conditions of this Agreement, MARINA hereby grants to PROTIVA and its Affiliates a non-exclusive, irrevocable (subject to Subsection 9.2(c)), perpetual, worldwide license, with the right to grant sublicenses as permitted in Section 2.2, under the MARINA Technology to research, develop, make, have made, use, import, offer for sale, sell, have sold, commercialize and otherwise exploit any Product in the Field in the Territory.

2.2 Sublicense Rights.

PROTIVA may sublicense to a Third Party the rights granted to it by MARINA under Section 2.1 at any time at its sole discretion, but only in connection with:

(a) the continuing research, development and or commercialization of a Protiva Product or the manufacturing of a Protiva Product by such Third Party or its Affiliates, either itself or as part of a collaboration with Protiva or any of its Affiliates, or

(b) the sublicense of a technology platform consisting of the use of Protiva's proprietary lipid nano-particle technology in combination with Marina Technology.

A "**Protiva Product**" means any Product with respect to which Protiva or any of its Affiliates has conducted research, manufacturing, development activities that are related to such Product. For the avoidance of doubt, this Section 2.2 shall not include any right by Protiva to grant a "naked" sublicense of Marina Technology alone.

Article 3 DISCLOSURE AND TRANSFER OF Marina KNOW-HOW AND COOPERATION

3.1 Disclosure and Transfer of Marina Know-How.

As soon as reasonably possible after the Effective Date (and in any event within ten (10) days after the Effective Date), Marina, without additional consideration, shall use good faith, diligent efforts to disclose to Protiva or its designated Affiliate all Marina Know-How in existence as of the Effective Date and shall provide such copies of any existing tangible embodiment thereof in written or electronic form as may be reasonably requested by Protiva, including delivery of an electronic copy of the UNA Data in a commonly usable format (to the extent in existence on the date hereof). Such disclosures shall include all Marina Know-How and any other data, information and documents known to and Controlled by Marina as of the Effective Date which may be necessary or useful to Protiva to practice the licenses granted hereunder efficiently.

3.2 Cooperation.

Upon request by Protiva within a reasonable period after disclosure by Marina of the Marina Know-How and other data, information and documents pursuant to Section 3.1, Marina will provide reasonable assistance to Protiva or its designated Affiliate in connection with understanding and using the Marina Know-How for purposes consistent with licenses and rights granted to Protiva hereunder; *provided*, that Protiva shall promptly pay or reimburse Marina for any travel or other out-of-pocket expenses incurred by Marina in connection with providing such assistance requested by Protiva.

Article 4 FINANCIAL PROVISIONS

4.1 Upfront Payment.

(a) In partial consideration of the rights granted by Marina to Protiva under this Agreement, Protiva shall pay to Marina within [**] of the Effective Date a non-refundable, non-creditable upfront payment in the amount of [**] (the "**Upfront Payment**").

(b) [**]

[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(c) [**]

4.2 Milestone Payments.

(a) In partial consideration of the license rights granted by MARINA under this Agreement, PROTIVA shall pay to MARINA a milestone payment upon first achievement by PROTIVA or an Affiliate (but not by any Sublicensee, as further set forth below in this Section 4.2) of the applicable milestone event set forth in the table below (each such event, a "**Milestone Event**"), such payments to be in the listed amounts for the applicable Milestone Event:

Milestone Event	Milestone Payment
For each PROTIVA Product directed to a specific gene target:	
(1) [**]	[**]
(2) [**]	[**]
(3) [**]	[**]

(b) For clarity each of the above milestone payments shall be paid only once for a particular PROTIVA Product directed to a specific gene target, regardless if any such Milestone Event is achieved more than once for that particular PROTIVA Product directed to a specific gene target.

(c) For additional clarity, where PROTIVA has entered into a sublicense agreement with a Sublicensee who has been granted rights to commercialize a PROTIVA Product directed to a specific gene target, PROTIVA shall not be liable to pay any milestone payments on account of the achievement by the Sublicensee (alone, or in collaboration with PROTIVA or any of its Affiliates) of any of the foregoing Milestone Events; but instead, any payments received by PROTIVA on account of the Sublicensee's milestone achievement shall be included in Sublicensing Revenue and PROTIVA shall pay to MARINA the applicable Sublicense Fees pursuant to Section 4.5.

(d) PROTIVA shall promptly notify MARINA of the achievement of any Milestone Event for each PROTIVA Product directed to a specific gene target. All milestone payments under Subsection 4.2(a) are non-refundable and non-creditable, and shall be due within [**] of achievement of the applicable Milestone Event.

4.3 Royalties.

In partial consideration of the license rights granted by MARINA under this Agreement, PROTIVA

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shall pay to MARINA a royalty on Net Sales of PROTIVA Products by PROTIVA or any of its Affiliates during the Royalty Term as follows:

(a) For sales of a PROTIVA Product in any country in the Territory where such sale would infringe, absent the license granted in Section 2.1, a Valid Claim of an issued MARINA Patent, PROTIVA shall pay to MARINA a royalty on Net Sales of such PROTIVA Product calculated using the royalty rate set opposite the amount of Net Sales in the table below:

Net Sales in a Calendar Year	Royalty Rate
[**]	[**]
[**]	[**]
[**]	[**]

(b) For sales of a PROTIVA Product in any country in the Territory where either (i) there are no Valid Claims covering the PROTIVA Product that would be infringed, absent the license granted in Section 2.1, by a sale of such PROTIVA Product, or (ii) sales of Generic Products exist alongside sales of the PROTIVA Product, PROTIVA shall pay to MARINA a reduced royalty on Net Sales of such PROTIVA Product calculated using the royalty rate set opposite the amount of Net Sales in the table below:

Net Sales in a Calendar Year	Royalty Rate
[**]	[**]
[**]	[**]
[**]	[**]

provided, however, that the royalty obligation under this Subsection 4.3(b) in respect of such PROTIVA Product in all countries in the Territory shall cease upon the tenth (10th) anniversary of the First Commercial Sale of such PROTIVA Product in any Major Market country.

4.4 Anti-Stacking Provisions.

If PROTIVA or its Affiliate owes to one or more Third Parties, under license agreement(s) granting PROTIVA (or its Affiliate or Sublicensee) Intellectual Property Rights that are needed to make, use, sell or otherwise commercialize the MARINA Technology as contained in the PROTIVA Product, royalties or similar payments on sales of such PROTIVA Products, then PROTIVA may reduce the royalties owed to MARINA under Section 4.3 by [**] of the royalty or similar payments actually paid to such Third Parties, provided that PROTIVA shall not reduce any particular royalty payment to MARINA by more than [**] of the amount otherwise owed under Section 4.3 for the applicable royalty period.

[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.5 Sublicense Fees.

In partial consideration of the license rights granted by MARINA under this Agreement, including specifically the right to sublicense such rights under Section 2.2, PROTIVA shall pay to MARINA an amount (the "**Sublicense Fees**") equal to a percentage of Sublicensing Revenue received by PROTIVA (or its Affiliate) from its Sublicensees pursuant to such sublicenses. The percentage of Sublicensing Revenue payable by PROTIVA to MARINA shall be determined by the development stage of the PROTIVA Product that is the subject of the sublicense at the time PROTIVA or its Affiliate and the Sublicensee execute such sublicense, as follows:

Development Stage at Time of Sublicense Execution	Percentage of Sublicensing Revenue
[**]	[**]
[**]	[**]
[**]	[**]
[**]	[**]

4.6 Payment of Royalty and Sublicense Fee Obligations.

The royalty obligation under Section 4.3 shall accrue upon the sales of a PROTIVA Product in each particular country in the Territory, commencing upon First Commercial Sale after Regulatory Approval of the PROTIVA Product in such country and, except as otherwise provided under Subsection 4.3(b), such obligation shall end upon the expiration of the Royalty Term applicable to such PROTIVA Product in such country. All such royalty payments are non-refundable and non-creditable and shall be due within [**] after the end of each Calendar Quarter and are payable in immediately available funds. The Sublicense Fees owed under Section 4.5 shall be paid, with respect to particular Sublicensing Revenue received by PROTIVA, within [**] after PROTIVA's receipt of the applicable revenues, and are payable in immediately available funds. PROTIVA shall notify MARINA in writing promptly upon the First Commercial Sale of each PROTIVA Product in each country and thereafter PROTIVA shall furnish MARINA with a written report (the "**Royalties Report**") for each completed Calendar Quarter showing, on a country-by-country basis, according to the volume of units of PROTIVA Products sold in each such country (by SKU) during the reporting period (whether PROTIVA Product is sold by PROTIVA or its Affiliates or Sublicensees):

(a) the gross invoiced sales of the PROTIVA Product sold in each country during the reporting period, and the amounts deducted therefrom to determine Net Sales from such gross invoiced sales;

(b) the royalties payable in dollars, if any, which shall have accrued hereunder based upon such Net Sales; and

(c) the withholding taxes, if any, required by Applicable Law to be deducted in respect of such sales (provided that, as to sales by Sublicensees, PROTIVA shall report only the net sales numbers (using the definition for such term in the applicable Sublicense) as

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reported by the Sublicensee, if such Sublicensee does not report gross invoiced sales numbers).

With respect to sales of PROTIVA Products invoiced in US dollars, the gross invoiced sales, Net Sales and royalties payable shall be expressed in the Royalties Report in US Dollars. With respect to sales of PROTIVA Products invoiced in a currency other than US Dollars, the gross invoiced sales, Net Sales and royalties payable shall be expressed in the Royalties Report in the domestic currency of the party making the sale as well as in the US Dollar equivalent of the royalties payable and the exchange rate used in determining the amount of US dollars. The US dollar equivalent shall be calculated on a calendar-month basis using the average monthly interbank rate listed in *The Wall Street Journal*.

4.7 Currency Restrictions.

If at any time legal restrictions in any country in the world prevent the prompt remittance of any payments with respect to sales in that country, PROTIVA shall have the right and option upon written notice to MARINA to make (or to cause its Sublicensee to make) such payments by depositing the amount thereof in local currency to MARINA's account (or such other designated nominee by MARINA) in a bank or depository in such country.

4.8 Taxes.

In the event that laws, rules or regulations require PROTIVA to withhold taxes with respect to any payment to be made by PROTIVA to MARINA pursuant to this Agreement, PROTIVA will notify MARINA of such withholding requirement prior to making the payment to MARINA. Any and all taxes levied by a proper taxing authority required to be withheld by PROTIVA or its Sublicensees on account of royalties accruing to MARINA under this Agreement may be deducted from such royalty payment provided that (a) such amount is promptly paid for and on behalf of MARINA to the appropriate tax authorities, and (b) PROTIVA furnishes MARINA with official tax receipts or other appropriate evidence of payment issued by the appropriate tax authorities. PROTIVA shall provide such assistance to MARINA, including the provision of such documentation as may be required by a tax authority, as may be reasonably necessary in MARINA's efforts to claim an exemption from or reduction of such taxes.

4.9 Late Payments.

All fees and royalties not received by MARINA when due under this Agreement shall bear interest from the date they were due until the date they are paid at a rate equal to the then current 30-day United States dollar LIBOR rate plus two percent per annum or the maximum rate permitted by law, whichever is less. Notwithstanding anything to the contrary in this Agreement, PROTIVA shall have no obligation to pay royalties to MARINA pursuant to Section 4.3 until PROTIVA actually receives revenue from Net Sales.

4.10 Audit.

PROTIVA and its Affiliates shall keep complete and accurate records of the underlying revenue and expense data relating to the calculations of Net Sales, Sublicensing Revenue and payments required under this Agreement. MARINA shall have the right, at its own expense and no more than once per Calendar Year, to have an independent, certified public accountant, selected by MARINA and reasonably acceptable to PROTIVA, review all such records upon reasonable notice

and during regular business hours and under obligations of strict confidence, for the sole purpose of verifying the basis and accuracy of payments required and made under this Agreement within the prior [**] period. No Calendar Quarter may be audited more than one time. PROTIVA shall receive a copy of each audit report promptly from MARINA. Should the inspection lead to the discovery of a discrepancy to MARINA's detriment, PROTIVA shall pay the amount of the discrepancy in MARINA's favor within [**] after being notified thereof. MARINA shall pay the full cost of the inspection unless the discrepancy is greater than [**], in which case PROTIVA shall pay to MARINA the actual cost charged by such accountant for such inspection. If such audit shows a discrepancy in PROTIVA's favor, then PROTIVA may credit the amount of such discrepancy against subsequent amounts owed to MARINA, or if no further amounts are owed under this Agreement, then MARINA shall pay PROTIVA the amount of the discrepancy within [**] after being notified thereof.

Article 5 PAYMENT TERMS

5.1 Payment Terms.

All payments from PROTIVA to MARINA shall be made by wire transfer to the credit of such bank account as may be designated by MARINA in this Agreement or in writing to PROTIVA. Any payment which falls due on a date which is not a Business Day may be made on the next succeeding Business Day.

5.2 Currency.

All payments under this Agreement shall be paid in US dollars.

Article 6 INTELLECTUAL PROPERTY

6.1 Ownership of Inventions.

Subject to Section 6.2, as between PROTIVA and MARINA:

(a) all Inventions of any kind whatsoever first conceived, reduced to practice, developed or created by MARINA or its Affiliates, alone or with any Third Party, prior to or during the Term relating to UNA or the UNA Platform Technology ("**MARINA Inventions**") shall be owned by MARINA; and

(b) all Inventions of any kind whatsoever first conceived, reduced to practice, developed or created by one or more Persons acting on behalf of MARINA or its Affiliates (or any Third Party acting under its direction) together with one or more Persons acting on behalf of PROTIVA or its Affiliates (or any Third Party acting under its direction) during the Term relating to UNA or the UNA Platform Technology ("**Joint IP**"), shall be jointly owned by the Parties. Neither Party shall assign its rights to Joint IP without the prior written consent of the other Party.

Inventorship and authorship will be determined under the applicable rules and precedents prevailing in the United States.

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6.2 Disclosure of Inventions During the Term.

If, within [**] after the Effective Date and during the Term, MARINA becomes the owner, solely or jointly, of any additional Intellectual Property Rights that constitute MARINA Inventions, whether developed in the performance of this Agreement or (unless prohibited by the terms of any agreement between MARINA and a Third Party) outside the framework of this Agreement, and whether or not patentable, MARINA will notify PROTIVA in writing within [**] of becoming aware of any such disclosable MARINA Inventions. MARINA shall, throughout the Term, provide status updates on any additional Intellectual Property Rights that constitute disclosable MARINA Inventions at such times and in such manner as may be mutually agreed by the Parties, provided that during the first two (2) years during the Term, the Parties shall meet no less frequently than on a Calendar Quarterly basis.

6.3 Perfection of Ownership Rights.

Each Party will ensure that its employees and contractors who perform any obligations under this Agreement have entered into written agreements with such Party under which its employees and contractors assign to such Party all ownership rights in any Intellectual Property Rights made or developed by its employees and contractors in the course of work for such Party.

Article 7 PATENT PROSECUTION

7.1 Prosecution and Maintenance.

(a) All Patent applications included in the MARINA Patents and, upon issuance, all resulting issued Patents therefrom, shall be filed, prosecuted and maintained by MARINA, at its sole cost and expense and in its discretion, which shall be exercised in good faith, in accordance with this Article 7.

(b) All Patent applications arising from Joint IP and, upon issuance, all resulting issued Patents therefrom, shall be filed, prosecuted and maintained by PROTIVA, at its sole cost and expense and in its discretion, which shall be exercised in good faith, in accordance with this Article 7.

(c) Without limiting the generality of the foregoing, MARINA and PROTIVA shall in the performance of their respective obligations under Subsections 7.1(a) and 7.1(b), be responsible for:

(i) the continued prosecution of any pending Patent applications;

(ii) the maintenance of all such issued Patents; and

(iii) the filing and prosecution of additional Patent applications (and maintenance of Patents thereon) in any jurisdiction world-wide, on a commercially reasonable basis, including, without limitation, any continuations, continuations-in-part, divisionals, Patents of addition, reissues, re-examinations, supplemental protection certificates, renewals and extensions or substitutes therefore.

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7.2 Updating of Patent Tables.

(a) The table of licensed Patents in Exhibit A ("**Table of Licensed Patents**") will be deemed to be a living document continually updated by notice from MARINA to PROTIVA of Patent filing, prosecution, maintenance and discontinuation of any MARINA Patents.

(b) PROTIVA shall create and maintain a table of Patents arising from Joint IP ("**Table of Jointly Owned Patents**"), which table will be deemed to be a living document continually updated by notice from PROTIVA to MARINA of Patent filing, prosecution, maintenance and discontinuation of any Patents arising from Joint IP.

(c) By way of non-limiting example, a Patent application shall be deemed to have been added to the Table of Licensed Patents or to the Table of Jointly Owned Patents, as applicable, on the date that such Patent application is submitted to the US Patent and Trademarks Office or any foreign equivalent.

7.3 Consultation and Reporting.

(a) On a timely basis, MARINA will consult with PROTIVA on all material actions to be taken with respect to the filing, prosecution and maintenance of the MARINA Patents, including claims and any proposed amendments thereto. PROTIVA will have the right to comment on MARINA's proposed actions and to identify any process, uses or Products arising out of the MARINA Technology that may be patentable and MARINA will reasonably consider such comments.

(b) On a timely basis, PROTIVA will consult with MARINA on all material actions to be taken with respect to the filing, prosecution and maintenance of any Patents arising from Joint IP, including claims and any proposed amendments thereto. MARINA will have the right to comment on PROTIVA 's proposed actions and to identify any process, uses or Products arising out of the Joint IP that may be patentable and PROTIVA will reasonably consider such comments.

(c) In the performance of their respective obligations under Section 7.1, MARINA will disclose to PROTIVA in respect of the MARINA Patents, and PROTIVA will disclose to MARINA in respect of the Patents arising from Joint IP, on a timely basis:

(i) the complete text of each Patent application and issued Patent within the MARINA Patents or Patents arising from Joint IP, as applicable; and

(ii) all material communications to and from the patent office, including communications concerning the institution or possible institution of any interference, opposition, re-examination, reissue, revocation, nullification or any official proceeding involving any of the MARINA Patents or Patents arising from Joint IP, as applicable.

(d If MARINA desires additional claims to be filed, prosecuted and maintained under any Patents arising from Joint IP for MARINA or its sublicensees' uses outside the Field, MARINA will:

(i) notify PROTIVA in writing setting forth the specific claims, jurisdiction and nature of Patent protection required by MARINA; and

(ii) request that PROTIVA file a divisional application with such additional claims and either (A) oversee the prosecution of such divisional application, at its cost and expense, in which case MARINA will keep PROTIVA informed of the progress thereof, or (B) have PROTIVA oversee the prosecution of such divisional application, and reimburse PROTIVA for all costs and expenses (including PROTIVA's external patent counsel costs) incurred by PROTIVA in pursuing such additional claims ("**Patent Prosecution Fees**").

All Patent Prosecution Fees shall be due and payable to PROTIVA within [**] of MARINA'S receipt of each invoice from PROTIVA, with interest on late payment calculated in accordance with Section 4.9. Notwithstanding anything to the contrary in this Agreement, PROTIVA reserves the right to offset any unpaid Patent Prosecution Fees and accrued interest against any payments due by PROTIVA to MARINA hereunder.

(e) Notwithstanding Section 7.4 MARINA shall instruct its patent counsel retained from time to time in the Territory for the filing, prosecution and maintenance of the MARINA Patents to forthwith notify PROTIVA in writing in the event of any of the following:

(i) MARINA fails to pay when due any statement of account or invoice issued by such patent counsel in respect of the MARINA Patents;

(ii) MARINA fails to provide to its patent counsel instructions relating to the filing, prosecution or maintenance of any of the Marina Patents, or any other proceeding relating thereto, that could reasonably, if left unattended, compromise the continued prosecution of any patent application, the issuance of any patent, the validity of any issued patent, the outcome of any proceeding relating to the MARINA Patents or otherwise impair any Patent rights under the MARINA Patents; or

(iii) if such patent counsel reasonably believes that a state of facts exists (including, without limitation, delay or lack of funds) that could reasonably, if left unattended, compromise the continued prosecution of any patent application, the issuance of any patent, the validity of any issued patent, the outcome of any proceeding relating to the MARINA Patents or otherwise impair any Patent rights under the MARINA Patents.

7.4 Abandonment, Withdrawal and Discontinuance.

(a) If either Party elects to:

(i) discontinue pursuing one or more Patent applications, Patent protection or Patent maintenance pertaining to any of the MARINA Patents or Patents arising from Joint IP or any continuation, continuation-in-part, divisional, reissue, re-examination or extension thereof for any reason; or

(ii) not pursue Patent protection in relation to any of the MARINA Patents or Patents arising from Joint IP in any specific jurisdiction for any reason;

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the Party electing to discontinue Patent filing, prosecution or maintenance will give the other Party prior written notice of such decision (each, a "**Notice of Abandonment**"), and together with sufficient detail in sufficient time, such time not to be less than [**] prior to any deadline imposed by a patent office, to enable the other Party to assume and continue the filing, prosecution or maintenance of the Patents identified in the Notice of Abandonment (the "**Abandoned Patents**").

(b) The Notice of Abandonment will clearly identify the Patents that are being abandoned, the actions required to assume and continue the filing, prosecution or maintenance of the Patents and the deadlines by which action must be taken to avoid abandonment. The Party in receipt of such notice at its sole cost and expense, and in its sole discretion, may assume and continue the prosecution and/or maintenance of any particular Abandoned Patent identified in such notice (the "**Non-Abandoning Party**").

(c) In addition, if within [**] of receiving an Invention disclosure from the Non-Abandoning Party, the Abandoning Party does not file a Patent application for the Invention described therein that the Non-Abandoning Party believes could become a Patent:

(i) the Non-Abandoning Party may prepare and file a Patent application for the Invention;

(ii) a Notice of Abandonment will be deemed to have been given upon the Abandoning Party's receipt of the Invention disclosure and the Patent application for the Invention, when filed by the Non-Abandoning Party, will be deemed an Abandoned Patent, including all rights under Patents related thereto, including foreign counterparts.

(d) Both Parties agree that, effective upon [**] after the Notice of Abandonment, the Abandoning Party will have no further obligations to assume and continue the filing, prosecution, maintenance, protection and related costs for the Abandoned Patents, provided that if the Non-Abandoning Party assumes and continues the prosecution and/or maintenance of any particular Abandoned Patent, the Abandoning Party will provide the Non-Abandoning Party with all reasonable assistance required for the prosecution, maintenance, defense and/or enforcement of the Abandoned Patent, at the Non-Abandoning Party's cost and expense.

7.5 Prosecuting Infringement Proceedings.

During the Term each Party shall promptly report in writing to the other Party any known or suspected infringement in the Field of any MARINA Patents or Patents arising from Joint IP of which it becomes aware, and shall provide the other Party with all available evidence supporting such infringement, or unauthorized use or misappropriation. In the event of such alleged infringement by a Third Party, the following shall apply:

(a) MARINA shall have the first right, in its sole discretion and sole expense and using counsel of its choice and reasonably acceptable to PROTIVA, to initiate an infringement

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or other appropriate suit against any Third Party anywhere in the Territory who at any time has infringed, or is suspected of infringing, any such Patent in the Field;

(b) if MARINA does not take steps to prosecute such claim or litigation within [**] after receipt of notice thereof, PROTIVA may take such legally permissible action as it deems necessary or appropriate to prosecute such claim or litigation (or defend such litigation in the event of a counterclaim) at its own expense, using counsel of its choice, but shall not be obligated to do so;

(c) the Party prosecuting such litigation (in this Article, the "**Litigating Party**") shall have the right to control such litigation and shall bear all legal expenses (including court costs and legal fees), including settlement thereof; provided, however, that no settlement or consent judgment or other voluntary final disposition of any suit or action brought by a Party pursuant to this Section may be entered into without the consent of the other Party if such settlement would require the other Party to be subject to an injunction or to make a monetary payment or would restrict the claims in or admit any invalidity of any such Patent or significantly adversely affect the rights of the other Party to this Agreement (the "**Non-litigating Party**"). By way of example and not by way of limitation, there shall be no right of the Litigating Party to stipulate or admit to the invalidity or unenforceability of any such Patents. Before any action is taken by the Litigating Party, the Parties agree to, in good faith, consult with a goal of adopting a mutually satisfactory position;

(d) the Non-litigating Party agrees to co-operate reasonably in any such litigation to the extent of executing all necessary documents, supplying essential documentary evidence and making essential witnesses then in its employment available and to vest in the Litigating Party the right to institute any such suits, so long as all the direct or indirect costs and expenses of bringing and conducting any such litigation or settlement shall be borne by the Litigating Party, provided that the Parties shall recover their respective actual out-of-pocket expenses, or equitable proportions thereof, associated with any litigation or settlement thereof from any recovery made by any Party. Any excess amount remaining after satisfaction of the Parties' recovery of their respective actual out-of-pocket expenses (the "**Excess Amount**") shall be shared as follows: (i) [**] to the Litigating Party and (ii) [**] to the Non-litigating Party;

(e) the Litigating Party shall keep the Non-litigating Party fully informed of the actions and positions taken or proposed to be taken by the Litigating Party on behalf of itself or a sublicense (if applicable) and actions and positions taken by all other parties to such litigation; and

(f) at any time during the litigation, the Non-litigating Party may elect to participate formally in the litigation to the extent that the court may permit, at its expense (subject to the possibility of recovery of some or all of such additional expenses as described in Subsection 7.5(d) or from such other parties to the litigation).

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7.6 Breach of Confidence Proceedings.

In the event of an alleged breach of confidentiality respecting Confidential Information or any Third Party use of Confidential Information, if each Party agrees in its sole discretion that the interests of the Parties are aligned in connection with such breach or use, each Party shall reasonably cooperate with the other to enjoin such Third Party's use of such Confidential Information.

7.7 Defense of Infringement Proceedings.

In the event that a Third Party at any time provides written notice of a claim, or brings an action, suit or proceeding, against any Party or any of their respective Affiliates or Sublicensees, claiming infringement of its Patents or unauthorized use or misappropriation of its know-how, due to the use of the Intellectual Property Rights in and to the MARINA Technology or the making, using or selling of Products covered by the MARINA Patents the Party in receipt of such written notice or claim shall promptly notify the other Party of same, enclosing a copy of the claim and all papers served. In the event of such alleged infringement, the Parties will assist one another and cooperate in any such litigation and, if applicable, be subject to the indemnification obligations of Article 12.

7.8 Procedures.

If required under applicable law in order for the Litigating Party to initiate and/or maintain such suit, or if the Litigating Party is unable to initiate or prosecute such suit solely in its own name or it is otherwise advisable to obtain an effective legal remedy, in each case, the Non-Litigating Party shall join as a party to the suit and will execute and cause its Affiliates to execute all document necessary for the Litigating Party to initiate litigation to prosecute and maintain such action. In addition, at the Litigating Party's request, the Non-Litigating Party shall provide reasonable assistance to the Litigating Party in connection with an infringement suit at no charge to the Litigating Party except for reimbursement by the Litigating Party of reasonable out-of-pocket expenses incurred by the Non-Litigating Party in rendering such assistance.

7.9 Product Trademarks.

PROTIVA shall own the trademarks for any PROTIVA Product and shall be solely responsible for filing and maintaining such trademarks in the Territory (including payment of costs associated therewith). PROTIVA shall also assume full responsibility, at its sole cost and expense, for taking legal action against any infringement by a Third Party of any PROTIVA Product trademark, and for claims of infringement of the rights of a Third Party by the use of a PROTIVA Product's trademark.

Article 8 CONFIDENTIALITY

8.1 Duty of Confidence.

Subject to the other provisions of this Article 8, all Confidential Information disclosed by a Party or its Affiliates under this Agreement will be maintained in confidence and otherwise safeguarded by the recipient Party. The recipient Party may only use the Confidential Information for the purposes of this Agreement and pursuant to the rights granted to the recipient Party under this Agreement. Subject to the other provisions of this Article 8, each Party shall

hold as confidential such Confidential Information of the other Party or its Affiliates in the same manner and with the same protection as such recipient Party maintains its own confidential information. Subject to the other provisions of this Article 8, a recipient Party may only disclose Confidential Information of the other Party to employees, agents, contractors, consultants and advisers of the Party and its Affiliates and to Third Parties (including, in the case of PROTIVA, Sublicensees and their Affiliates) but in each case only to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement and only if such Persons are bound to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

8.2 Exceptions.

The obligations under this Article 8 shall not apply to any information to the extent the recipient Party can demonstrate by competent evidence that such information:

(a) is (at the time of disclosure) or becomes (after the time of disclosure) generally known to the public or part of the public domain through no breach of this Agreement by the recipient Party or its Affiliates;

(b) was known to, or was otherwise in the possession of, the recipient Party or its Affiliates prior to the time of disclosure by the disclosing Party or any of its Affiliates;

(c) is disclosed to the recipient Party or an Affiliate on a non-confidential basis by a Third Party who is entitled to disclose it without breaching any confidentiality obligation to the disclosing Party or any of its Affiliates; or

(d) is independently developed by or on behalf of the recipient Party or its Affiliates, as evidenced by its written records, without reference to the Confidential Information disclosed by the disclosing Party or its Affiliates under this Agreement.

(e) Specific aspects or details of Confidential Information shall not be deemed to be within the public domain or in the possession of the recipient Party merely because the Confidential Information is embraced by more general information in the public domain or in the possession of the recipient Party. Further, any combination of Confidential Information shall not be considered in the public domain or in the possession of the recipient Party merely because individual elements of such Confidential Information are in the public domain or in the possession of the recipient Party unless the combination and its principles are in the public domain or in the possession of the recipient Party.

8.3 Authorized Disclosures.

(a) In addition to disclosures allowed under Section 8.2, PROTIVA may disclose Confidential Information belonging to MARINA or its Affiliates to the extent such disclosure is necessary in the following instances:

(i) filing or prosecuting Patents as permitted by this Agreement; and

(ii) in connection with Regulatory Filings for Products.

(b) In addition, PROTIVA may disclose Confidential Information belonging to MARINA or its Affiliates to the extent such disclosure is necessary in connection with prosecuting or defending litigation as permitted by this Agreement; *provided*, that PROTIVA (i) informs

MARINA as soon as reasonably practicable of the proposed disclosure; and (ii) shall use commercially reasonable efforts (but in no event less than the efforts used by PROTIVA with respect to confidential information derived from its other drug development and commercialization efforts) to limit the disclosure for the required purpose and to obtain protections to maintain the confidentiality of such MARINA Confidential Information.

(c) In addition, PROTIVA and its Affiliates and Sublicensees may disclose Confidential Information of MARINA to Third Parties (including Sublicensees and their Affiliates) as may be necessary or useful in connection with the development, manufacture or commercialization of Products; *provided*, that such Third Parties are bound in writing to maintain the confidentiality of such Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

(d) In the event the recipient Party is required to disclose Confidential Information of the disclosing Party by law or in connection with bona fide legal process, such disclosure shall not be a breach of this Agreement; *provided*, that the recipient Party (i) informs the disclosing Party as soon as reasonably practicable of the required disclosure; (ii) limits the disclosure to the required purpose; and (iii) at the disclosing Party's request and expense, assists in the disclosing Party's attempt to object to or limit the required disclosure.

(e) Notwithstanding anything to the contrary contained in this Article 8 or Article 11, MARINA shall be permitted to disclose a copy of this Agreement to:

(i) MARINA's current or prospective banks, financial institutions, investors or other Third Parties for the purpose of raising capital or borrowing money or maintaining compliance with agreements, arrangements and understandings relating thereto; and

(ii) to any Person who proposes to be an assignee or to purchase or otherwise succeed (by merger, operation of law or otherwise) to all of MARINA's right, title and interest in, to and under this Agreement, if (A) such Person agrees to maintain the confidentiality of this Agreement pursuant to a written agreement at least as protective as the terms set forth in this Article 8 (with the exception of the term of the obligation of confidentiality, which may be for a specified term of years) and (B) any such assignment, purchase or succession would be permitted under Section 13.1.

Article 9 TERM AND TERMINATION

9.1 Term.

The term of this Agreement, as to a particular PROTIVA Product in a particular country, shall expire (on a country-by-country basis) upon the earlier of:

(a) the expiration of the Royalty Term for such PROTIVA Product in such country; or

(b) the end of calendar quarter in which sales in such country of Generic Products exceed 50% (on a "per unit" basis) of the sales of the PROTIVA Product in such country.

Upon expiration of the Royalty Term with respect to a PROTIVA Product in a particular country, then the licenses granted in Section 2.1 for such PROTIVA Product in such country shall become

fully paid up and irrevocable, and shall survive any expiration or termination of this Agreement. This Agreement shall expire in its entirety upon the expiration of the last Royalty Term for any MARINA Patent with respect to which PROTIVA has a license under this Agreement, unless earlier terminated pursuant to this Article 9.

9.2 Termination.

(a) Termination for Convenience. PROTIVA shall have the right to terminate this Agreement for convenience in its entirety, or in respect of any particular country or countries in the Territory, by giving ninety (90) days prior written notice to MARINA, *provided that* no such termination shall be effective sooner than the date that is nine (9) months after the Effective Date.

(b) Termination for Bankruptcy/Insolvency.

(i) A Party may immediately terminate this Agreement in its entirety, or in respect of any particular country or countries in the Territory, on written notice in the event (each, a "**Financial Event**") any of the following occurs with respect to the other Party (the "**Bankrupt Party**"):

(A) such Bankrupt Party files a petition in bankruptcy or makes a general assignment for the benefit of creditors or otherwise acknowledges in writing insolvency, or is adjudged bankrupt, and such Bankrupt Party (1) fails to assume this Agreement in any such bankruptcy proceeding within thirty (30) days after filing or (2) assumes and assigns this Agreement to a Third Party;

(B) such Bankrupt Party goes into or is placed in a process of complete liquidation;

(C) a trustee or receiver is appointed for any substantial portion of such Bankrupt Party's business and such trustee or receiver is not discharged within sixty (60) days after appointment;

(D) any case or proceeding shall have been commenced or other action taken against such Bankrupt Party in bankruptcy or seeking liquidation, reorganization, dissolution, a winding-up arrangement, composition or readjustment of its debts or any other relief under any bankruptcy, insolvency, reorganization or similar act or law of any jurisdiction now or hereafter in effect and is not dismissed or converted into a voluntary proceeding governed by Subparagraph 9.2(b)(i)(A) within sixty (60) days after filing; or

(E) there shall have been issued a warrant of attachment, execution, distraint or similar process against any substantial part of the property of such Bankrupt Party and such event shall have continued for a period of sixty (60) days and none of the following has occurred: (1) it is dismissed, (2) it is bonded in a manner reasonably satisfactory to the other Party, or (3) it is discharged.

(ii) In the event MARINA:

(A) makes an assignment for the benefit of creditors, or petition or applies to any tribunal for the appointment of a custodian, receiver, or trustee for all or a substantial part of its assets;

(B) commences any proceeding under any bankruptcy, dissolution, or liquidation law or statute of any jurisdiction whether now or hereafter in effect;

(C) has any such petition or application filed or any such proceeding commenced against it in which an order for relief is entered or an adjudication or appointment is made, and which remains undismissed for a period of one hundred twenty (120) calendar days or more;

(D) takes any corporate action indicating its consent to, approval of, or acquiescence in any such petition, application, proceeding, or order for relief or the appointment of a custodian receiver, or trustee for all or substantial part of its assets; or

(E) permits any such custodianship, receivership, or trusteeship to continue undischarged for a period of one hundred twenty (120) calendar days or more;

(each, a "**Bankruptcy Action**") and the occurrence of any of the foregoing causes the applicable Party or any Third Party, including, without limitation, a trustee in bankruptcy, to be empowered under state or federal law to reject this Agreement or any Agreement supplementary hereto, then PROTIVA shall have the following rights:

(F) in the event of a rejection of this Agreement or any agreement supplementary hereto, PROTIVA shall be permitted to receive and use any MARINA Technology within the scope of its license hereunder for the purpose of enabling it to mitigate damages caused to PROTIVA because of the rejection of this Agreement;

(G) in the event of a rejection of this Agreement or any Agreement supplementary hereto, PROTIVA may elect to retain its rights under this Agreement or any agreement supplementary hereto as provided in Section 365(n) of the United States Bankruptcy Code or comparable provision of the laws of any other country in the Territory. Upon PROTIVA's written request to MARINA or the bankruptcy trustee or receiver, MARINA or such bankruptcy trustee or receiver shall not interfere with the rights of PROTIVA as provided in this Agreement or in any agreement supplementary thereto;

(H) in the event of a rejection of this Agreement or any Agreement supplementary hereto, PROTIVA may elect to retain its rights under this Agreement or any agreement supplementary hereto as provided in Section 365(n) of the United States Bankruptcy Code or comparable provision of the laws of any other country in the Territory without prejudice to any of its rights of setoff and/or recoupment with respect to

this Agreement under the Bankruptcy Code or applicable non-bankruptcy law; and

(I) in the event of a rejection of this Agreement or any Agreement supplementary hereto, PROTIVA may retain its rights under this Agreement or any agreement supplementary hereto as provided in Section 365(n) of the United States Bankruptcy Code or comparable provision of the laws of any other country in the Territory without prejudice to any of its rights under Section 503(b) of the United States Bankruptcy Code or comparable provision of the laws of any other country.

(iii) Notwithstanding anything to the contrary in this Subsection 9.2(b):

(A) any reorganization or arrangement involving MARINA, its Affiliates and/or its wholly owned subsidiaries which does not prejudice the rights of PROTIVA shall not constitute a Bankruptcy Action for the purposes of this Subsection 9.2(b) and shall not give rise to the remedies set forth in this Subsection 9.2(b); and

(B) if PROTIVA asserts any rights under Subparagraphs 9.2(b)(ii)(F), 9.2(b)(ii)(G), 9.2(b)(ii)(H) or 9.2(b)(ii)(I), PROTIVA shall continue to be bound by all liabilities and obligations imposed upon PROTIVA and its Affiliates and Sublicensees, and any remedies available to MARINA under this Agreement.

(c) Termination for PROTIVA Material Breach. Upon any material breach by PROTIVA under this Agreement, MARINA may notify PROTIVA in writing of such breach and require that PROTIVA cure such breach within a cure period not shorter than sixty (60) days after receipt of MARINA's notice for any default of a payment obligation under this Agreement, or one hundred and twenty (120) days after receipt of MARINA's notice for any other material breach. In the event PROTIVA shall not have cured such breach by the end of the applicable cure period, MARINA may terminate this Agreement immediately upon written notice to PROTIVA. Notwithstanding the foregoing cure periods, non-payment of the Upfront Payment in accordance with Section 4.1 shall automatically and immediately terminate this Agreement.

(d) Termination for MARINA Material Breach. Upon any material breach by MARINA under this Agreement, PROTIVA may notify MARINA in writing of such breach and require that MARINA cure such breach within a cure period of one hundred and twenty (120) days after receipt of PROTIVA's notice. In the event MARINA shall not have cured such breach by the end of the cure period, then, at PROTIVA's sole option:

(i) the license granted by MARINA to PROTIVA shall automatically convert into a worldwide, royalty-free, fully paid-up, perpetual license; or

(ii) PROTIVA may terminate this Agreement in its entirety, or in respect of any particular country or countries in the Territory, immediately upon written notice to MARINA.

9.3 Effect of Termination.

(a) Upon termination of this Agreement in its entirety pursuant to this Article 9:

(i) all licenses granted hereunder to PROTIVA shall revert to MARINA;

(ii) all sublicenses granted by PROTIVA under the rights or licenses granted to PROTIVA under this Agreement shall survive such termination, *provided that* the applicable Sublicensees are not in material breach of such sublicense agreements, and shall become direct licenses with MARINA *except that* MARINA shall not have any obligations under any such sublicense agreements that are greater than the obligations of MARINA under this Agreement; and

(iii) PROTIVA (and its Affiliates) shall immediately cease all development and Commercialization of any PROTIVA Products that contain MARINA Know-How and/or are claimed by a Valid Claim, and shall return to MARINA all physical manifestations of the MARINA Technology and MARINA Confidential Information.

(b) Upon termination of this Agreement in any particular country in the Territory pursuant to this Article 9, this Agreement shall be amended so as to delete from the Territory, the country that is the subject of the termination.

9.4 Survival.

(a) Notwithstanding any expiration or termination of this Agreement, the provisions of Article 1; Sections 4.8, 4.9 and 4.10; Sections 6.1 and 6.3; Sections 7.1, 7.7, 7.8 and 7.9 and (as to Joint IP only) Sections 7.3, 7.4 and 7.5; Article 8; Article 9; Sections 10.1 and 10.2 (solely for purposes of indemnification from third party claims); Sections 10.3, 10.4(c), 10.5; Article 11; Article 12; Article 13, and any other provisions which by their nature are intended to survive any such expiration or termination shall survive any expiration or termination of this Agreement.. Termination of this Agreement shall not relieve the Parties of any liability which accrued hereunder prior to the effective date of such termination nor preclude either Party from pursuing all rights and remedies it may have hereunder or at law or in equity with respect to any breach or default of this Agreement nor prejudice either Party's right to obtain performance of any obligation.

(b) Any sublicense contemplated in Section 2.2 shall survive termination of the licenses or other rights granted to PROTIVA under this Agreement and be assumed by MARINA as long as:

(i) the Sublicensee is not then in breach of its license and/or sublicense agreement;

(ii) the Sublicensee agrees in writing to be bound to MARINA as a licensor under the terms and conditions of the license and/or sublicense agreement; and

(iii) the Sublicensee agrees in writing that in no event shall MARINA assume any obligations or liabilities, or be under any obligation or requirement of performance, under any such license and/or sublicense extending beyond MARINA's obligations and liabilities under this Agreement.

Article 10 REPRESENTATIONS, WARRANTIES AND COVENANTS

10.1 Representations and Warranties by Each Party.

Each Party represents and warrants to the other as of the Effective Date that:

(a) it is a corporation duly organized, validly existing, and in good standing under the laws of its jurisdiction of formation;

(b) it has full corporate power and authority to execute, deliver, and perform this Agreement, and has taken all corporate action required by law and its organizational documents to authorize the execution and delivery of this Agreement and the consummation of the transactions contemplated by this Agreement;

(c) this Agreement constitutes a valid and binding agreement enforceable against it in accordance with its terms;

(d) all consents, approvals and authorizations from all governmental authorities or other Third Parties required to be obtained by such Party in connection with the execution, delivery and performance of this Agreement have been obtained; and

(e) the execution and delivery of this Agreement and all other instruments and documents required to be executed pursuant to this Agreement, and the consummation of the transactions contemplated hereby do not (i) conflict with or result in a breach of any provision of its organizational documents, (ii) result in a breach of any agreement to which it is a party; or (iii) violate any law.

10.2 Representations and Warranties by MARINA.

MARINA represents and warrants to PROTIVA as of the Effective Date that:

(a) Exhibit A sets forth a complete and accurate list of all MARINA Patents;

(b) MARINA has obtained from all individuals who participated in any respect in the invention or authorship of any MARINA Technology effective assignments of all ownership rights of such individuals in such MARINA Technology, either pursuant to written agreement or by operation of law;

(c) All of MARINA's employees, officers, and consultants have executed agreements or have existing obligations under applicable laws requiring assignment to MARINA of all inventions made during the course of and as the result of their association with MARINA and obligating the individual to maintain as confidential MARINA's Confidential Information as well as confidential information of other parties (including PROTIVA and its Affiliates, although they may not be specifically referenced by name) which such individual may receive, to the extent required to support MARINA's obligations under this Agreement;

(d) MARINA has all necessary legal rights and authority to grant the licenses and rights granted under this Agreement and has not assigned, transferred, conveyed or licensed its right, title and interest in the MARINA Technology in any manner inconsistent with such license grant or the other terms of this Agreement;

(e) MARINA has all necessary legal rights and authority to use and disclose and to enable PROTIVA to use and disclose (in each case under appropriate conditions of confidentiality) the MARINA Know-How;

(f) To MARINA's knowledge, the issued Patents in the MARINA Patents are valid and enforceable without any claims, challenges, oppositions, interference or other proceedings pending or, to MARINA's knowledge, threatened and MARINA has filed and

prosecuted Patent applications within the MARINA Patents in good faith and, to MARINA's knowledge, complied with all duties of disclosure with respect thereto;

(g) To MARINA's knowledge, MARINA has not committed any act, or omitted to commit any act, that may cause the MARINA Patents to expire prematurely or be declared invalid or unenforceable;

(h) All application, registration, maintenance and renewal fees in respect of the MARINA Patents as of the Effective Date have been paid and all necessary documents and certificates have been filed with the relevant agencies for the purpose of maintaining the MARINA Patents;

(i) To MARINA's knowledge, the practice of the MARINA Technology does not infringe Patents or misappropriate Know-How of any Third Party, nor has MARINA received any written notice alleging such infringement or misappropriation;

(j) MARINA has not initiated or been involved in any proceedings or claims in which it alleges that any Third Party is or was infringing the MARINA Patents or misappropriating any MARINA Know-How, nor have any such proceedings been threatened by MARINA, nor does MARINA know of any valid basis for any such proceedings;

(k) MARINA has taken all reasonable precautions to preserve the confidentiality of the MARINA Know-How;

(l) MARINA has not entered into a government funding relationship that would result in rights to any Products residing in the US Government, National Institutes of Health, National Institute for Drug Abuse or other agency, and the licenses granted hereunder are not subject to overriding obligations to the US Government as set forth in Public Law 96-517 (35 U.S.C. 200-204), as amended, or any similar obligations under the laws of any other country;

(m) Subject to Subsection 0, MARINA has not granted any Third Party rights that would otherwise interfere or be inconsistent with PROTIVA's rights hereunder, and there are no agreements or arrangements to which MARINA or any of its Affiliates is a party relating to the Products, MARINA Patents, MARINA Know-How or that would limit the rights granted to PROTIVA under this Agreement or that restrict or will result in a restriction on PROTIVA' ability to develop, manufacture, register, use or commercialize the Products in the Territory; and

(n) MARINA has not failed to disclose to PROTIVA any fact or circumstance known to MARINA and relating to any of the MARINA Technology that would be reasonably material to PROTIVA in determining to enter into this Agreement or the transactions contemplated herein.

10.3 Acknowledgements of PROTIVA.

PROTIVA acknowledges that MARINA has granted rights to practice certain MARINA Patents:

(a) to [**] solely in connection with the development and commercialization of a limited number of specified proprietary compounds belonging to [**]; and

(b) to [**] in connection with DNAi human therapeutic use.

DNAi does not include RNAi, antisense and microRNA oligonucleotides that base pair with mRNAs, microRNAs or pre-mRNAs to affect expression of a gene, directly or indirectly. The Parties agree that the foregoing grants do not interfere with, are not otherwise inconsistent with, and do not limit the rights granted to PROTIVA in Section 2.1.

10.4 Covenants of MARINA.

MARINA covenants and agrees that:

(a) it will not grant any interest in the MARINA Technology which is inconsistent with the terms and conditions of this Agreement;

(b) if, at any time after execution of this Agreement, it becomes aware that it or any employee, agent or subcontractor of MARINA who participated, or is participating, in the development of the MARINA Technology is on, or is being added to the FDA Debarment List, it will provide written notice of this to PROTIVA within two (2) Business Days of its becoming aware of this fact; and

(c) it shall maintain insurance with respect to its indemnification obligations under this Agreement in such amounts as are commercially reasonable in the industry for companies conducting similar business and shall require any of its Affiliates undertaking activities under this Agreement to do the same.

10.5 No Other Warranties.

EXCEPT AS EXPRESSLY STATED IN THIS Article 10:

(a) NO OTHER REPRESENTATION, CONDITION OR WARRANTY WHATSOEVER IS MADE OR GIVEN BY OR ON BEHALF OF PROTIVA OR MARINA; AND

(b) ALL OTHER CONDITIONS AND WARRANTIES WHETHER ARISING BY OPERATION OF LAW OR OTHERWISE ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING ANY CONDITIONS AND WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

Article 11 INDEMNIFICATION; LIABILITY

11.1 Indemnification by MARINA.

MARINA shall defend, indemnify, and hold PROTIVA, its Affiliates, and their respective officers, directors, employees and agents, and all successors and assigns of any of the foregoing ("**PROTIVA Indemnitees**") harmless from and against any Claims against them to the extent arising or resulting from:

[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(a) the gross negligence or willful misconduct of MARINA or any of its Affiliates; or

(b) the breach of any of the covenants, representations or warranties made by MARINA to PROTIVA under this Agreement;

provided, however, that MARINA shall not be obliged to so indemnify, defend and hold harmless the PROTIVA Indemnitees for any Claims to the extent that PROTIVA has an obligation to indemnify MARINA Indemnitees pursuant to Section 11.2 or to the extent that such Claims arise from the breach, gross negligence or willful misconduct of PROTIVA or a PROTIVA Indemnitee.

11.2 Indemnification by PROTIVA.

PROTIVA shall defend, indemnify, and hold MARINA, its Affiliates, and their respective officers, directors, employees and agents, and all successors and assigns of any of the foregoing ("**MARINA Indemnitees**") harmless from and against any Claims against them to the extent arising or resulting from:

(a) the gross negligence or willful misconduct of PROTIVA or any of its Affiliates or Sublicensees;

(b) the breach of any of the covenants, representations or warranties made by PROTIVA to MARINA under this Agreement;

(c) the exercise or practice by PROTIVA, its Affiliates or Sublicensees of the license granted to PROTIVA under Section 2.1 (excluding any such Claim that alleges that the exercise or practice of the MARINA Technology infringes a Patent or misappropriates other Intellectual Property Rights of a Third Party); or

(d) the development, manufacture or commercialization of any PROTIVA Product by or for PROTIVA, its Affiliates or Sublicensees;

provided, however, that PROTIVA shall not be obliged to so indemnify, defend and hold harmless the MARINA Indemnitees for any Claims to the extent that MARINA has an obligation to indemnify PROTIVA Indemnitees pursuant to Section 11.1 or to the extent that such Claims arise from the breach, gross negligence or willful misconduct of MARINA or a MARINA Indemnitee.

11.3 Indemnification Procedure.

(a) For the avoidance of doubt, all indemnification claims in respect of a PROTIVA Indemnitee or MARINA Indemnitee shall be made solely by PROTIVA or MARINA, respectively, on behalf of the PROTIVA Indemnitee or MARINA Indemnitee, as the case may be.

(b) A Party seeking indemnification hereunder ("**Indemnified Party**") shall notify the other Party ("**Indemnifying Party**") in writing reasonably promptly after the assertion against the Indemnified Party of any Claim or fact in respect of which the Indemnified Party intends to base a claim for indemnification hereunder ("**Indemnification Claim Notice**"), but the failure or delay to so notify the Indemnifying Party shall not relieve the Indemnifying Party of any obligation or liability that it may have to the Indemnified Party, except to the extent that the Indemnifying Party demonstrates that its ability to defend or resolve such Claim is adversely affected thereby. The Indemnification Claim Notice shall contain a description of the claim and the nature and amount of the Claim (to

the extent that the nature and amount of such Claim is known at such time). Upon the request of the Indemnifying Party, the Indemnified Party shall furnish promptly to the Indemnifying Party copies of all correspondence, communications and official documents (including court documents) received or sent in respect of such Claim.

(c) Subject to the provisions of Subsection 11.3(d), the Indemnifying Party shall, within [**] after receipt of the Indemnification Claim Notice, advise the Indemnified Party whether it is assuming the defense and handling of such Claim, at the Indemnifying Party's sole expense. The assumption of the defense of a Claim by the Indemnifying Party shall not be construed as acknowledgement that the Indemnifying Party is liable to indemnify any indemnitee in respect of the Claim, nor shall it constitute a waiver by the Indemnifying Party of any defenses it may assert against any Indemnified Party's claim for indemnification. In the event that it is ultimately decided that the Indemnifying Party is not obligated to indemnify or hold an indemnitee harmless from and against the Claim, the Indemnified Party shall reimburse the Indemnifying Party for any and all reasonable costs and expenses (including attorneys' fees and costs of suit) incurred by the Indemnifying Party in its defense of the Claim.

(d) Upon assumption of the defense of a Claim by the Indemnifying Party:

(i) the Indemnifying Party shall have the right to and shall assume sole control and responsibility for dealing with the Claim;

(ii) the Indemnifying Party may, at its own cost, appoint as counsel in connection with conducting the defense and handling of such Claim any law firm or counsel reasonably selected by the Indemnifying Party and reasonably satisfactory to the Indemnified Party (such consent not to be unreasonably withheld or delayed);

(iii) the Indemnifying Party shall keep the Indemnified Party informed of the status of such Claim; and

(iv) the Indemnifying Party shall have the right to settle the Claim on any terms the Indemnifying Party chooses;

provided, however, that it shall not, without the prior written consent of the Indemnified Party, agree to a settlement of any Claim which could lead to liability for or create any financial or other obligation or restriction on the Indemnified Party (or abrogate the license rights granted under this Agreement) for which the Indemnified Party is not entitled to indemnification hereunder or which admits any wrongdoing or responsibility for the Claim on behalf of the Indemnified Party. The Indemnified Party shall cooperate with the Indemnifying Party at the Indemnifying Party's expense. In particular, the Indemnified Party shall furnish such records, information and testimony, provide witnesses and attend such conferences, discovery proceedings, hearings, trials and appeals as may be reasonably requested in connection therewith; subject to the right of the Indemnified Party to obtain confidentiality protection in connection therewith consistent with the confidentiality provisions of this Agreement. Such cooperation shall include access during normal business hours by the Indemnifying Party to, and

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[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

reasonable retention by the Indemnified Party of, records and information that are reasonably relevant to such Claim, and making the Indemnified Party, the PROTIVA Indemnitees or MARINA Indemnitees, as the case may be, and its and their employees and agents available on a mutually convenient basis to provide additional information and explanation of any records or information provided. The Indemnified Party shall be entitled to participate in, but not control, the defense of such Claim with its own counsel and at its own expense; *provided, however*, that if the litigants in any such action include both the Indemnified Party and the Indemnifying Party and legal counsel for the Indemnified Party shall have reasonably concluded in a written legal opinion delivered to the Indemnifying Party that, by reason of certain bona fide defenses available to the Indemnified Party which are different from or additional to those available to the Indemnifying Party, the interests of the Indemnified Party materially conflict with the interests of the Indemnifying Party such that it would be unethical under applicable rules relating to attorney conflicts of interest for the Indemnifying Party and such Indemnified Party to be represented by the same counsel with respect to such defense, the Indemnified Party shall have the right to select one separate counsel and to assert such legal defenses, with the reasonable expenses and fees of such separate counsel to be reimbursed by the Indemnifying Party as and when incurred.

(e) If the Indemnifying Party fails to assume or conduct the defense and handling of any Claim in good faith as provided Subsections 11.3(c) and 11.3(d), the Indemnified Party may, at the Indemnifying Party's expense, select counsel reasonably acceptable to the Indemnifying Party (such consent not to be unreasonably withheld or delayed) in connection with conducting the defense and handling of such Claim and defend or handle such Claim in such manner as it may deem appropriate; *provided*, that the foregoing shall not be construed as a limitation on the Indemnified Party's right to claim that the Indemnifying Party has breached its obligations pursuant to this Article 11. In such event, the Indemnified Party shall keep the Indemnifying Party timely apprised of the status of such Claim and the Indemnified Party shall have the right to settle the Claim on any terms the Indemnified Party chooses; *provided, however*, that the Indemnified Party shall not, without the prior written consent of the Indemnifying Party, agree to a settlement of any Claim which could lead to liability or create any financial or other obligation on the part of the Indemnifying Party, other than its liability for indemnification of the Indemnified Party as provided in this Article 11, or which admits any wrongdoing or responsibility for the claim on behalf of the Indemnifying Party.

11.4 Mitigation of Loss.

Each Indemnified Party will take and will procure that its Affiliates take all such reasonable steps and action as are necessary or as the Indemnifying Party may reasonably require in order to mitigate any Claims (or potential losses or damages) under this Article 11. Nothing in this Agreement shall or shall be deemed to relieve any Party of any common law or other duty to mitigate any losses incurred by it.

11.5 Insurance.

PROTIVA shall, at its own expense, procure and maintain during the Term and for a period of [**] thereafter, insurance policy/policies, including product liability insurance, adequate to cover its obligations hereunder and which are consistent with normal business practices of prudent companies similarly situated.

11.6 Special, Indirect and Other Losses.

NEITHER PARTY NOR ANY OF ITS AFFILIATES SHALL BE LIABLE IN CONTRACT, TORT, NEGLIGENCE BREACH OF STATUTORY DUTY OR OTHERWISE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR FOR ANY ECONOMIC LOSS OR LOSS OF PROFITS SUFFERED BY THE OTHER PARTY, EXCEPT TO THE EXTENT ANY SUCH DAMAGES ARE REQUIRED TO BE PAID TO A THIRD PARTY AS PART OF A CLAIM FOR WHICH A PARTY PROVIDES INDEMNIFICATION UNDER THIS Article 11.

11.7 No Exclusion.

Neither Party excludes any liability for death or personal bodily injury caused by its negligence or the negligence of its Affiliates or, in the case of PROTIVA, its Sublicensees, or their respective employees, agents or sub-contractors.

Article 12 PUBLICATIONS AND PUBLICITY

12.1 Publications.

For avoidance of doubt, PROTIVA or any of its Affiliates may, without any required consents from MARINA but subject to its confidentiality obligations under Article 8 with respect to the Confidential Information of MARINA:

(a) issue press releases and other public statements as it deems appropriate in connection with the development and commercialization of the Products under this Agreement; and

(b) publish or have published information about clinical trials related to the Products, including the results of such clinical trials

12.2 Publicity

(a) Neither Party shall use the name, symbol, trademark, trade name or logo of the other Party or its Affiliates in any press release, publication or other form of public disclosure without the prior written consent of the other Party in each instance (such consent not to be unreasonably withheld or delayed), except for those disclosures for which consent has already been obtained. Notwithstanding the foregoing, PROTIVA shall be entitled, upon reasonable prior notice to MARINA, to use the name of MARINA to identify its licensor to the extent necessary or useful in connection with the development or commercialization

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[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

of the Products, including in connection with sublicensing and subcontracting transactions.

(b) Subject to Subsection 12.2(c), each Party agrees not to issue any press release or other public statement, whether oral or written, disclosing the existence of this Agreement, the terms hereof or any information relating to this Agreement without the prior written consent of the other Party, which approval shall not be unreasonably withheld, conditioned or delayed; *provided*, *however*, that PROTIVA may issue press releases and other public statements as it deems appropriate in connection with the development and commercialization of Products under this Agreement and *provided further*, that the Parties approve the text of the press releases annexed as Exhibit B to this Agreement.

(c) Notwithstanding the foregoing, each Party may, without the prior approval of the other Party, make any disclosures required of it to comply with any duty of disclosure it may have pursuant to law or governmental regulation or pursuant to the rules of any recognized stock exchange. The Parties shall nevertheless use good faith efforts to coordinate with each other with respect to the timing, form and content of such required disclosure. If so requested by the other Party, the Party subject to such obligation shall use commercially reasonable efforts to obtain an order, agreement or other governmental or Third Party action protecting to the maximum extent possible the confidentiality of such provisions of this Agreement as reasonably requested by the other Party. Unless the Parties otherwise agree, such disclosure shall be limited to the minimum required as determined by the disclosing Party in consultation with its legal counsel. Without limiting the foregoing, each Party shall consult with the other Party on the provisions of this Agreement, together with exhibits or other attachments attached hereto, to be redacted in any filings made by MARINA or PROTIVA with the Securities and Exchange Commission (or other regulatory body) or as otherwise required by law.

Article 13 GENERAL PROVISIONS

13.1 Assignment.

Neither Party may assign its rights and obligations under this Agreement without the other Party's prior written consent, except that:

(a) a Party may assign its rights and obligations under this Agreement or any part hereof to one or more of its Affiliates without the consent of the other Party; and

(b) either Party may assign this Agreement in its entirety to a successor to all or substantially all of its business or assets to which this Agreement relates.

The assigning Party shall provide the other Party with prompt written notice of any such assignment pursuant to Subsection 13.1(b). Any permitted assignee shall assume all obligations of its assignor under this Agreement (or related to the assigned portion in case of a partial assignment to an Affiliate), and no permitted assignment shall relieve the assignor of liability hereunder. Any attempted assignment in contravention of the foregoing shall be void. Subject to the terms of this Agreement, this Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and permitted assigns.

13.2 Extension to Affiliates; Subcontractors.

PROTIVA shall have the right to extend the rights, immunities and obligations granted in this Agreement to one or more of its Affiliates. All applicable terms and provisions of this Agreement shall apply to any such Affiliate to which this Agreement has been extended to the same extent as such terms and provisions apply to PROTIVA. PROTIVA shall remain primarily liable for any acts or omissions of its Affiliates. In addition, PROTIVA may subcontract to Third Parties the performance of any tasks and obligations relating to its exercise of the license and other rights under this Agreement as PROTIVA deems appropriate, subject to its confidentiality obligations pursuant to Article 8.

13.3 Severability.

Should one or more of the provisions of this Agreement become void or unenforceable as a matter of law, then this Agreement shall be construed as if such provision were not contained herein and the remainder of this Agreement shall be in full force and effect, and the Parties will use their commercially reasonable efforts to substitute for the invalid or unenforceable provision a valid and enforceable provision which conforms as nearly as possible with the original intent of the Parties.

13.4 Governing Law and Jurisdiction.

This Agreement shall be governed by and construed under the laws of New York, without giving effect to the conflicts of laws provision thereof. Any disputes between the Parties relating to this Agreement shall be subject to the exclusive jurisdiction and venue of the federal courts located in the Southern District of New York (without restricting any right of appeal), and the Parties hereby waive any objection which they may have now or hereafter to the laying of venue of any proceedings in such courts and to any claim that such proceedings have been brought in an inconvenient forum, and further agree that a judgment or order in any such proceedings shall be binding upon each of them and may be enforced in the courts of any other jurisdiction.

13.5 Force Majeure.

Neither Party shall be responsible to the other for any failure or delay in performing any of its obligations under this Agreement or for other nonperformance hereunder if such delay or nonperformance is caused by strike, stoppage of labor, lockout or other labor trouble, fire, flood, accident, war, act of terrorism, act of God or of the government of any country or of any local government, or by other cause unavoidable or beyond the reasonable control of any Party hereto.

13.6 Waivers and Amendments.

The failure of any Party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other Party. No waiver shall be effective unless it has been given in writing and signed by the Party giving such waiver. No provision of this Agreement may be amended or modified other than by a written document signed by authorized representatives of each Party.

13.7 Relationship of the Parties.

Nothing contained in this Agreement shall be deemed to constitute a partnership, joint venture,

or legal entity of any type between MARINA and PROTIVA, or to constitute one as the agent of the other. Moreover, each Party agrees not to construe this Agreement, or any of the transactions contemplated hereby, as a partnership for any tax purposes. Each Party shall act solely as an independent contractor, and nothing in this Agreement shall be construed to give any Party the power or authority to act for, bind, or commit the other.

13.8 Notices.

All notices, consents, waivers, and other communications under this Agreement must be in writing and will be deemed to have been duly given when: (a) delivered by hand (with written confirmation of receipt); (b) sent by fax (with written confirmation of receipt), *provided*, that a copy is immediately sent by an internationally recognized overnight delivery service (receipt requested); or (c) when received by the addressee, if sent by an internationally recognized overnight delivery service (receipt requested), in each case to the appropriate addresses and fax numbers set forth below (or to such other addresses and fax numbers as a Party may designate by notice):

If to MARINA:
MARINA Biotech, Inc.
PO Box 1599
Bothell, Washington
USA 98041
Attn: Mr. J. Michael French
President and CEO
Fax: (206) 830-9424

If to PROTIVA:
PROTIVA Biotherapeutics Inc.
100 - 8900 Glenlyon Parkway
Burnaby, British Columbia
Canada V5J 5J8
Attn: Dr. Mark Murray
President & CEO
Fax: 604) 419-3201

13.9 Further Assurances.

PROTIVA and MARINA hereby covenant and agree without the necessity of any further consideration, to execute, acknowledge and deliver any and all such other documents and take any such other action as may be reasonably necessary to carry out the intent and purposes of this Agreement.

13.10 Compliance with Law.

Each Party shall perform its obligations under this Agreement in accordance with all applicable laws. No Party shall, or shall be required to, undertake any activity under or in connection with this Agreement which violates, or which it believes, in good faith, may violate, any applicable law.

13.11 No Third Party Beneficiary Rights.

The provisions of this Agreement are for the sole benefit of the Parties and their successors and permitted assigns, and they shall not be construed as conferring any rights to any Third Party (including any third party beneficiary rights).

13.12 English Language.

This Agreement is written and executed in the English language. Any translation into any other

language shall not be an official version of this Agreement and in the event of any conflict in interpretation between the English version and such translation, the English version shall prevail.

13.13 Expenses.

Except as otherwise expressly provided in this Agreement, each Party shall pay the fees and expenses of its respective lawyers and other experts and all other expenses and costs incurred by such Party incidental to the negotiation, preparation, execution and delivery of this Agreement.

13.14 Entire Agreement.

This Agreement, together with its Exhibits, sets forth the entire agreement and understanding of the Parties as to the subject matter hereof and supersedes all proposals, oral or written, and all other prior communications between the Parties, with respect to such subject matter. In the event of any conflict between a substantive provision of this Agreement and any Exhibit hereto, the substantive provisions of this Agreement shall prevail.

13.15 Cumulative Remedies.

No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

13.16 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement may be executed by the Parties and transmitted by facsimile or other form of electronic transmission and if so executed and transmitted shall be for all purposes as effective as if the Parties had delivered an executed original agreement.

IN WITNESS WHEREOF, the Parties intending to be bound have caused this Agreement to be executed by their duly authorized representatives.

PROTIVA BIOTHERAPEUTICS INC.

By: *"signed"*
Name: Paul Brennan
Title: SVP Business Development

MARINA BIOTECH, INC.

By: *"signed"*
Name: J. Michael French
Title: President & CEO

EXHIBIT A

LIST OF CERTAIN MARINA PATENTS

CONFIDENTIAL

[**]

[**] Certain information on this page has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

EXHIBIT B

PRESS RELEASES

Tekmira Acquires Worldwide License to Novel RNAi Technology
Tekmira and Marina Biotech Enter into License Agreement for UNA Technology

November 28, 2012

Vancouver, BC — Tekmira Pharmaceuticals Corporation (Nasdaq: TKMR, TSX: TKM), a leading developer of RNA interference (RNAi) therapeutics, announced today that it will obtain a worldwide, non-exclusive license to a novel RNAi payload technology called Unlocked Nucleobase Analog (UNA) from Marina Biotech, Inc. (OTCQX:MRNA) for the development of RNAi therapeutics.

UNA technology can be used in the development of RNAi therapeutics, which treat disease by silencing specific disease causing genes. UNAs can be incorporated into RNAi drugs and have the potential to improve them by increasing their stability and reducing off-target effects.

“Our license to Marina’s UNA technology expands and diversifies our foundation of technologies that enable us to develop RNAi therapeutics. With Tekmira’s leading LNP delivery technology, a strong balance sheet, and access to multiple RNAi payload technologies, we are well positioned to aggressively advance multiple products into human clinical trials,” said Dr. Mark J. Murray, Tekmira’s President and CEO.

“We intend to leverage our expertise in LNP delivery and our broad understanding of therapeutic RNA payload design to optimize the use of UNA in our development pipeline, as well as provide pharmaceutical partners the opportunity to license UNAs combined with our LNP delivery technology to develop RNAi therapeutics,” added Dr. Murray.

Under the license agreement, Tekmira will receive a worldwide, non-exclusive rights to MARINA Biotech’s UNA technology for the development of RNAi therapeutic products, and MARINA will receive an upfront payment plus milestone and royalty payments on products developed by Tekmira that use UNA technology. Financial terms of the license agreement were not disclosed.

Unlocked Nucleobase Analogs (UNA) are acyclic ribonucleoside analogs in which the bond between C2’ and C3’ atoms is broken. This change in sugar structure renders this nucleoside analog very flexible. This characteristic is in contrast to the widely used locked nucleosides that lock the sugar conformation by a bridged bond between C2’ and C4’ atoms. The flexible nature of UNA reduces the binding affinity between two strands of an RNAi drug and gives unique characteristics to its genes silencing abilities. MARINA Biotech has demonstrated that UNA has the potential to improve RNAi therapeutics by increasing stability and reducing sense and antisense mediated off-target effects while retaining potency.

About RNAi and Tekmira’s LNP

RNAi therapeutics have the potential to treat a broad number of human diseases by "silencing" disease causing genes. The discoverers of RNAi, a gene silencing mechanism used by all cells, were awarded the 2006 Nobel Prize for Physiology or Medicine. RNAi therapeutics, such as "siRNAs," require delivery technology to be effective systemically. Tekmira believes its LNP technology represents the most widely adopted delivery technology for the systemic delivery of RNAi therapeutics. Tekmira's LNP platform is being utilized in multiple clinical trials by both Tekmira and its partners. Tekmira's LNP technology (formerly referred to as stable nucleic acid-lipid particles or SNALP) encapsulates siRNAs with high

efficiency in uniform lipid nanoparticles that are effective in delivering RNAi therapeutics to disease sites in numerous preclinical models. Tekmira's LNP formulations are manufactured by a proprietary method which is robust, scalable and highly reproducible, and LNP-based products have been reviewed by multiple FDA divisions for use in clinical trials. LNP formulations comprise several lipid components that can be adjusted to suit the specific application.

About Tekmira

Tekmira Pharmaceuticals Corporation is a biopharmaceutical company focused on advancing novel RNAi therapeutics and providing its leading lipid nanoparticle delivery technology to pharmaceutical partners. Tekmira has been working in the field of nucleic acid delivery for over a decade and has broad intellectual property covering LNPs. Further information about Tekmira can be found at www.tekmirapharm.com. Tekmira is based in Vancouver, B.C.

Forward-Looking Statements and Information

This news release contains “forward-looking statements” or “forward-looking information” within the meaning of applicable securities laws (collectively, “forward-looking statements”). Forward-looking statements are generally identifiable by use of the words “believes,” “may,” “plans,” “will,” “anticipates,” “intends,” “budgets,” “could,” “estimates,” “expects,” “forecasts,” “projects,” and similar expressions, and the negative of such expressions. Forward-looking statements in this news release include statements about a worldwide non-exclusive license to UNA technology from Marina Biotech, Inc.; the potential of UNA technology to improve siRNA; the use of UNA technology by Tekmira; the use of UNA technology to lead to future development of RNAi (ribonucleic acid interference) therapeutic products; providing pharmaceutical partners the opportunity to license UNAs combined with Tekmira’s LNP delivery technology to develop RNAi therapeutics; delivery of upfront payment plus milestone and royalty payments on products developed by Tekmira that use UNA technology; UNAs potential to improve siRNA therapeutics; Tekmira’s aggressive advancement of multiple products into human clinical trials; Tekmira’s strategy, future operations, clinical trials, prospects and the plans of management; RNAi product development programs; and expectations regarding the expansion of Tekmira’s product pipeline.

With respect to the forward-looking statements contained in this news release, Tekmira has made numerous assumptions regarding, among other things: LNP’s status as a leading RNAi delivery technology; Tekmira’s research and development capabilities and resources; UNA’s compatibility with Tekmira’s existing LNP technology platform and other technologies; the potential for UNA technology to lower the potential for off-target effects and increase the specificity of the guide strand; and the opportunity to develop product candidates using UNA technology. While Tekmira considers these assumptions to be reasonable, these assumptions are inherently subject to significant business, economic, competitive, market and social uncertainties and contingencies.

Additionally, there are known and unknown risk factors which could cause Tekmira’s actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements contained herein. Known risk factors include, among others: the possibility that UNA technology does not improve siRNA; the possibility that UNA is not compatible with Tekmira’s LNP technology and does not result in additional product candidates being developed by Tekmira; the possibility that pharmaceutical companies will not license UNAs combined with Tekmira’s LNP delivery technology to develop RNAi therapeutics; the possibility that other organizations have made advancements in RNAi delivery and payload technology that Tekmira is not aware of; and the possibility that Tekmira may not advance any further product candidates or expand its product pipeline.

A more complete discussion of the risks and uncertainties facing Tekmira appears in Tekmira's annual report on Form 20-F for the year ended December 31, 2011 (Annual Report), which is available at www.sedar.com or at www.sec.gov/edgar.shtml. All forward-looking statements herein are qualified in their entirety by this cautionary statement, and Tekmira disclaims any obligation to revise or update any such forward-looking statements or to publicly announce the result of any revisions to any of the forward-looking statements contained herein to reflect future results, events or developments, except as required by law.

Contact Information

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Marina Biotech Announces Worldwide Non-Exclusive Licensing Agreement for Nucleic Acid Chemistry to Tekmira Pharmaceuticals

Bothell, WA, November 28, 2012 – Marina Biotech, Inc. (OTCQX:MRNA), a leading oligonucleotide-based drug discovery and development company, announced today that it has entered into a license agreement with Tekmira Pharmaceuticals Corporation (Nasdaq: TKMR, TSX: TKM), where Marina will provide Tekmira a worldwide, non-exclusive license to Marina Biotech's Unlocked Nucleobase Analog (UNA) technology for the development of RNA interference therapeutics. Tekmira will have full responsibility for the development and commercialization of any products arising under the Agreement. Under terms of the Agreement, Marina Biotech will receive an upfront payment plus milestone and royalty payments on products developed by Tekmira that use UNA technology. Further terms of the Agreement were not disclosed.

"We are pleased to enter into this agreement with Tekmira, a leader in the development of RNAi-based therapeutics," stated J. Michael French, President and Chief Executive Officer of Marina Biotech. "Marina Biotech's UNA technology is quite novel. Besides providing drug-like properties to an RNAi drug, UNAs also eliminate passenger strand activity as well as reduce guide strand mediated microRNA-like off-target activity. The result is that UNAs are able to significantly increase target specificity of an RNAi compound to its gene target. We look forward to a continued relationship with the great team at Tekmira."

About Unlocked Nucleobase Analogs

Unlocked Nucleobase Analogs (UNA) are acyclic ribonucleoside analogs in which the bond between C2' and C3' atoms is broken. This change in sugar structure renders this nucleoside analog very flexible. This characteristic is in sharp contrast to the widely used locked nucleosides that lock the sugar conformation by a bridged bond between C2' and C4' atoms. The flexible nature of UNA reduces the binding affinity between two strands of an RNAi drug and gives unique characteristics to its genes silencing abilities. Marina Biotech has demonstrated that UNA has the potential to improve RNAi therapeutics by increasing stability and reducing sense and antisense mediated off-target effects while retaining potency.

About Marina Biotech, Inc.

Marina Biotech is a biotechnology company focused on the development and commercialization of oligonucleotide-based therapeutics utilizing multiple mechanisms of action including RNA interference (RNAi) and messenger RNA translational blocking. The Marina Biotech pipeline currently includes a clinical program in Familial Adenomatous Polyposis (a precancerous syndrome) and two preclinical programs -- in bladder cancer and myotonic dystrophy. Marina Biotech has entered into an agreement with both Mirna Therapeutics and ProNAi Therapeutics to license Marina Biotech's SMARTICLES® technology for the delivery of microRNA mimics and DNAi, respectively. In addition, Marina Biotech announced exclusive licensing agreements with Monsanto Company for Marina Biotech's delivery and chemistry technologies and with Girindus America for the supply of CRN-based oligonucleotides. Marina Biotech recently entered into a non-exclusive agreement with Novartis Institutes for Biomedical Research to license Marina Biotech's CRN technology for development of nucleic acid-based therapeutics. Marina Biotech's goal is to improve human health through the development of RNAi- and oligonucleotide-based compounds and drug delivery technologies that together provide superior therapeutic options for patients. Additional information about Marina Biotech is available at http://www.marinabio.com.

Forward-Looking Statements

Statements made in this news release may be forward-looking statements within the meaning of Federal Securities laws that are subject to certain risks and uncertainties and involve factors that may cause actual results to differ materially from those projected or suggested. Factors that could cause actual results to differ materially from those in forward-looking statements include, but are not limited to: (i) the ability of Marina Biotech to obtain additional and substantial funding in the immediate future; (ii) the ability of Marina Biotech to attract and/or maintain research, development, commercialization and manufacturing partners; (iii) the ability of Marina Biotech and/or a partner to successfully complete product research and development, including preclinical and clinical studies and commercialization; (iv) the ability of Marina Biotech and/or a partner to obtain required governmental approvals; and (v) the ability of Marina Biotech and/or a partner to develop and commercialize products prior to, and that can compete favorably with those of, competitors. Additional factors that could cause actual results to differ materially from those projected or suggested in any forward-looking statements are contained in Marina Biotech's most recent periodic reports on Form 10-K and Form 10-Q that are filed with the Securities and Exchange Commission. Marina Biotech assumes no obligation to update and supplement forward-looking statements because of subsequent events.

Contact:

Michael French

Chief Executive Officer

(425) 892-4322

admin@marinabio.com

EXHIBIT 12.1

CERTIFICATION PURSUANT TO RULE 13a-14 OR 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark J. Murray, certify that:

1. I have reviewed this annual report on Form 20-F of Tekmira Pharmaceuticals Corporation;

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 company as of, and for, the periods presented in this report;

4. The company's other certifying officer 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company 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 company, 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 company'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 company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent function):

   (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 company'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 company's internal control over financial reporting.

Date: October 29, 2013

/s/ Mark J. Murray
Mark J. Murray
President and Chief Executive Officer

EXHIBIT 12.2

CERTIFICATION PURSUANT TO RULE 13a-14 OR 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Bruce Cousins, certify that:

1. I have reviewed this annual report on Form 20-F of Tekmira Pharmaceuticals Corporation;

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 company as of, and for, the periods presented in this report;

4. The company's other certifying officer 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company 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 company, 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 company'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 company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent function):

   (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 company'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 company's internal control over financial reporting.

Date: October 29, 2013

/s/ Bruce Cousins
Bruce Cousins
Chief Financial Officer

EXHIBIT 13.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with this Annual Report of Tekmira Pharmaceuticals Corporation (the "Company") on Form 20-F for the year ended December 31, 2012, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I Mark J. Murray, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

2. The information contained in the Report fairly represents, in all material respects, the financial condition and results of the operations of the Company.

Date: October 29, 2013

/s/ Mark J. Murray
Mark J. Murray
President and Chief Executive Officer

EXHIBIT 13.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Tekmira Pharmaceuticals Corporation (the "Company") on Form 20-F for the year ended December 31, 2012, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I Bruce Cousins, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

2. The information contained in the Report fairly represents, in all material respects, the financial condition and results of the operations of the Company.

Date: October 29, 2013

/s/ Bruce Cousins
Bruce Cousins
Chief Financial Officer