Exhibit 10.22

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

PUBLIC HEALTH SERVICE

PATENT LICENSE AGREEMENT—*EXCLUSIVE*

COVER PAGE

For PHS internal use only:

Patent License Number: **L-025-01/0**

US Patent Numbers 5,821,081; 5,843,882; 5,962,653; 5,962,668; 5,998,587; 6,015,876; 6,245,737; 6,420,336; and 6,428,790; and US Patent Applications Numbers [*].

Licensee: **Biosyn, Inc.**

Cooperative Research and Development Agreement (CRADA) Number (if applicable): N/A

Additional Remarks:

Public Benefit(s): Microbicide to protect against infection by HIV

This Patent License Agreement, hereinafter referred to as the **"Agreement"**, consists of this Cover Page, an attached **Agreement**, a Signature Page, Appendix A (List of Patent(s) and/or Patent Application(s)), Appendix B (Field of Use and Territory), Appendix C (Royalties), Appendix D (Modifications), Appendix E (Benchmarks and Performance), Appendix F (Commercial Development Plan) and Appendix G (Developing Countries). The Parties to this **Agreement** are:

1) The National Institutes of Health ("NIH"), the Centers for Disease Control and Prevention ("CDC"), or the Food and Drug Administration ("FDA"), hereinafter singly or collectively referred to as "**PHS**", agencies of the United States Public Health Service within the Department of Health and Human Services ("**DHHS**"); and

2) The person, corporation, or institution identified above and/or on the Signature Page, having offices at the address indicated on the Signature Page, hereinafter referred to as "**Licensee**".

CONFIDENTIAL

PHS PATENT LICENSE AGREEMENT—*EXCLUSIVE*

PHS and **Licensee** agree as follows:

1. BACKGROUND

1.01 In the course of conducting biomedical and behavioral research, **PHS** investigators made inventions that may have commercial applicability.

1.02 By assignment of rights from **PHS** employees and other inventors, **DHHS**, on behalf of the United States Government, owns intellectual property rights claimed in any United States and/or foreign patent applications or patents corresponding to the assigned inventions. **DHHS** also owns any tangible embodiments of these inventions actually reduced to practice by **PHS**.

1.03 The Secretary of **DHHS** has delegated to **PHS** the authority to enter into this **Agreement** for the licensing of rights to these inventions.

1.04 **PHS** desires to transfer these inventions to the private sector through commercialization licenses to facilitate the commercial development of products and processes for public use and benefit.

1.05 **Licensee** desires to acquire commercialization rights to certain of these inventions in order to develop processes, methods, and/or marketable products for public use and benefit.

2. DEFINITIONS

2.01 **"Benchmarks"** mean the performance milestones that are set forth in Appendix E.

2.02 **"Commercial Development Plan"** means the written commercialization plan attached as Appendix F.

2.03 "**First Commercial Sale**" means the (a) first shipment of **Licensed Products** to an unrelated third party by or on behalf of **Licensee** or its sublicensees, or (b) the first performance of a **Licensed Process** for an unrelated third party by **Licensee** or its sublicensees, in each case by or on behalf of **Licensee** in exchange for cash (or some equivalent to which value can be assigned for the purpose of determining **Net Sales**) in excess of fully burdened manufacturing cost. Notwithstanding the foregoing, **First Commercial Sale** shall not include transfers at or below cost by or on behalf of **Licensee** or its sublicensees of **Licensed Products**, or the practice of **Licensed Processes**, in connection with compassionate use, emergency use, treatment Investigational New Drug Applications (IND's), or the like authorized by the U.S. Food and Drug Administration (FDA) or corresponding foreign agencies.

2.04 **"Government"** means the Government of the United States of America.

2.05 **"Licensed Biological Materials"** means:

a) Plasmid constructs encoding the wild type or mutant forms of the Cyanovirin-N gene, and;

b) Polyclonal antibodies and hybridoma cell lines producing monoclonal antibodies specific for wild type or mutant forms of Cyanovirin-N.

2.06 **"Licensed Field of Use"** means the field of use identified in Appendix B.

2.07 **"Licensed Patent Rights"** shall mean:

a) Patent applications (including provisional patent applications and PCT patent applications) and/or patents listed in Appendix A, all divisions and continuations of these applications, all patents issuing from such applications, divisions, and continuations, and any reissues, reexaminations, and extensions of all such patents;

b) to the extent that the following contain one or more claims directed to the invention or inventions disclosed in a) above: i) continuations-in-part of a) above; ii) all divisions and continuations of these continuations-in-part; iii) all patents issuing from such continuations-in-part, divisions, and continuations; iv) priority patent application(s) of a) above; and v) any reissues, reexaminations, and extensions and reregistrations of all such patents;

c) to the extent that the following contain one or more claims directed to the invention or inventions disclosed in a) above: all counterpart foreign and U.S. patent applications and patents to a) and b) above, including those listed in Appendix A.

Licensed Patent Rights shall *not* include b) or c) above to the extent that they contain one or more claims directed to new matter which is not the subject matter disclosed in a) above.

2.08 **"Licensed Process(es)"** means processes which, in the course of being practiced would be within the scope of one or more claims of the **Licensed Patent Rights** that have not been held unpatentable, invalid or unenforceable by an unappealed or unappealable judgment of a court of competent jurisdiction.

2.09 **"Licensed Product(s)"** means tangible materials which, in the course of manufacture, use, sale, or importation would be within the scope of one or more claims of the **Licensed Patent Rights** that have not been held unpatentable, invalid or unenforceable by an unappealed or unappealable judgment of a court of competent jurisdiction.

2.10 **"Licensed Territory"** means the geographical area identified in Appendix B.

2.11 **"Net Sales"** means the total gross receipts for sales of **Licensed Products** or practice of **Licensed Processes** by or on behalf of **Licensee** or its sublicensees, and from leasing, renting, or otherwise making **Licensed Products** available to others without sale or other dispositions, whether invoiced or not, less returns and allowances, packing costs, insurance costs, freight out, taxes or excise duties imposed on the transaction (if separately invoiced), and wholesaler and cash discounts in amounts customary in the trade to the extent actually granted. No deductions shall be made for commissions paid to individuals, whether they be with independent sales agencies or regularly employed by **Licensee**, or sublicensees, and on its payroll, or for the cost of collections.

In the event **PHS,** on a country-by-country basis, is receiving earned royalties under this **Agreement** from any **Licensed Product** sold in a form containing **Licensed Product(s)** and at least one other ingredient, product or component having a specific pharmalogical effect (i.e., an antiinfective or anti-inflammatory, but not a diluent, carrier, perfume etc.) (a **"Combination Product"**) which is sold separate and apart from the **Licensed Product(s)** in the **Combination Product**, **Net Sales** for such **Combination Product** will be calculated by multiplying the actual **Net Sales** of the **Combination Product** by the fraction A/(A+B), where A is the **Net Sales** price per dose of the **Licensed Product(s)** if sold separately and B is the **Net Sales** price per dose of the other ingredient(s), product(s) or component(s) in the **Combination Product**, if sold separately. If the other ingredient(s), product(s) or component(s) is not sold separately in a country, **Net Sales** for such **Combination Product** will be calculated by multiplying the actual **Net Sales** of the

Combination Product by the fraction A/C, where A is the **Net Sales** price per dose of the **Licensed Product(s),** if sold separately in said country, and C is the **Net Sales** price per dose of the **Combination Product**. If neither the **Licensed Product(s)** nor the other ingredient(s), product(s) or component(s) is sold separately in a country, then **Net Sales** for the **Combination Product** shall be determined by multiplying the **Net Sales** of the **Combination Product** by X/(X+Y), where X is the number of **Licensed Products** and Y the number of other ingredients, products or components in the **Combination Product**.

Notwithstanding the above determination of **Net Sales** of **Combination Product**, in no event shall the **Net Sales** used to calculate earned royalty due on a **Combination Product** be reduced by more than fifty (50%) percent of the actual **Net Sales** of the **Combination Product**.

2.12 **"Practical Application"** means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or **Government** regulations available to the public on reasonable terms.

2.13 **"Research License"** means a nontransferable, nonexclusive license to make and to use the **Licensed Products** or **Licensed Processes** as defined by the **Licensed Patent Rights** in the **Licensed Field of Use** for purposes of research and not for purposes of commercial manufacture, sale, distribution or for development for such commercial purposes.

2.14 "**Developing Country**" means countries eligible for support from the Global Alliance for Vaccine Initiatives (GAVI) or successor organization, or which at the effective date of this Agreement are those countries with a Gross National Product of less than US $1,000 per capita per year, and at the effective date of this **Agreement** include those listed in Appendix G.

2.15 "**Public Sector**" means the U.S. government and/or the government of a **Developing Country**, or any nonprofit entity empowered by the U.S. government and/or the government of a **Developing Country** to act for said government in matters applicable to this **Agreement**, organizations within the United Nations system including the World Health Organization and UNICEF, and other non-profit organizations when they purchase drugs or vaccines for delivery, manufacture and/or sale in the U.S. and **Developing Countries**.

2.16 **"Private Sector"** means all other parties other than the **Public Sector**.

3. GRANT OF RIGHTS

3.01 **PHS** hereby grants and **Licensee** accepts, subject to the terms and conditions of this **Agreement**, an exclusive license under the **Licensed Patent Rights** in the **Licensed Territory** to make and have made, to use and have used, to sell and have sold, to offer to sell, and to import any **Licensed Products** in the **Licensed Field of Use** and to practice and have practiced any **Licensed Processes** in the **Licensed Field of Use**.

3.02 This **Agreement** confers no license or rights by implication, estoppel, or otherwise under any patent applications or patents of **PHS** other than **Licensed Patent Rights** regardless of whether such patents are dominant or subordinate to **Licensed Patent Rights**. **PHS** represents to **Licensee** that as of the Effective Date of this **Agreement**, **PHS** is unaware of any other **PHS** patent rights that block or limit the **Licensed Patent Rights**.

3.03 **PHS** grants **Licensee** the benefit of any patent term extensions and reregistrations applicable to the **Licensed Patent Rights** and any Orphan Drug Act registrations applicable to **Licensed Products** and **Licensed Processes** and any comparable extensions and registrations in the **Licensed Territory**. **PHS** agrees to reasonably cooperate, such as by submitting applications to appropriate

governmental agencies, at the request and sole expense of **Licensee**, in connection with applying for and obtaining such extensions and registrations.

3.04 To the extent permitted by law, governmental regulation, and **PHS** policy, and other agreements between **PHS** and third parties, and for purposes only of seeking regulatory approval to commercialize **Licensed Products** and **Licensed Processes** in the **Licensed Field of Use**, **PHS** agrees to consider in good faith any requests from **Licensee** to make its preclinical and clinical data, if any, relating to **Licensed Products** and **Licensed Processes** available nonexclusively to **Licensee**, such requests shall be considered on an expedited basis and shall not be unreasonably denied and, in particular, where access by **Licensee** to such data may expedite obtaining approval from applicable regulatory agencies.

3.05 In addition to the above-mentioned rights, **PHS** grants to **Licensee**, subject to royalties as described herein, the use of **Licensed Biological Materials** required for use of the **Licensed Patent Rights** granted hereunder.

4. SUBLICENSING

4.01 Upon written approval by **PHS**, which approval will not be unreasonably withheld, **Licensee** may enter into sublicensing agreements under the **Licensed Patent Rights**. Such sublicensing arrangements shall be deemed to have been accepted by **PHS** if **PHS** does not object within Forty Five (45) days of **Licensee**'s written request for approval of a sublicense.

4.02 **Licensee** agrees that any sublicenses granted by it shall provide that the obligations to **PHS** of Paragraphs 5.01-5.04, 8.01, 10.01, 10.02, 12.05, and 13.05-13.10 of this **Agreement** shall be binding upon the sublicensee as if it were a party to this **Agreement**. **Licensee** further agrees to attach copies of these Paragraphs to all sublicense agreements. **PHS** acknowledges that some of the obligations in these Paragraphs may not appropriately apply to sublicensees, and agrees to reasonably consider limitations added by **Licensee** to such Paragraphs in a sublicense agreement to the extent permitted by law.

4.03 Any sublicenses granted by **Licensee** shall provide for the termination of the sublicense, or the conversion to a license directly between such sublicensees and **PHS**, at the option of the sublicensee, upon termination of this **Agreement** under Article 13. Such conversion is subject to **PHS** approval, which approval shall not be unreasonably withheld, and contingent upon acceptance by the sublicensee of the remaining provisions of this **Agreement**.

4.04 **Licensee** agrees to forward to **PHS** a copy of each fully executed sublicense agreement postmarked within thirty (30) days of the execution of such agreement. To the extent permitted by law, **PHS** agrees to maintain each such sublicense agreement as commercial and financial information obtained from a person and as privileged and confidential pursuant to the provisions of Section 9.09 of this **Agreement**.

5. STATUTORY AND PHS REQUIREMENTS AND RESERVED GOVERNMENT RIGHTS

5.01 **PHS** reserves on behalf of the **Government** an irrevocable, nonexclusive, nontransferable, royalty-free license for the practice of all inventions licensed under the **Licensed Patent Rights** throughout the world by or on behalf of the **Government** and on behalf of any foreign government or not-for-profit, public health international organization pursuant to any existing or future treaty or agreement to which

the Government is a signatory. Prior to **First Commercial Sale** and to the extent that **Licensee** has available material, **Licensee** agrees to provide **PHS,** subject to appropriate Materials Transfer Agreements, reasonable quantities of **Licensed Products** or materials made through the **Licensed Processes** for **PHS** research use, at a cost no greater than **Licensee's** fully burdened cost; i.e., direct costs of manufacturing plus overhead costs.

5.02 **Licensee** agrees that products used or sold in the United States embodying **Licensed Products** or produced through performance of **Licensed Processes** shall be manufactured substantially in the United States, unless a written waiver is obtained in advance from **PHS**.

5.03 **Licensee** acknowledges that **PHS** may enter into future Cooperative Research and Development Agreements (CRADAs) under the Federal Technology Transfer Act of 1986 that relate to the subject matter of this **Agreement**. **Licensee** agrees not to unreasonably deny requests for a **Research License** from such future collaborators with **PHS** when acquiring such rights is necessary in order to make a Cooperative Research and Development Agreement (CRADA) project feasible. **Licensee** may request an opportunity to join as a party to the proposed Cooperative Research and Development Agreement (CRADA). **PHS** agrees to notify **Licensee** in writing as soon as practicable, and before execution, that it is contemplating a CRADA with a research plan that overlaps with the **Licensed Field of Use** of this **Agreement**.

5.04 In addition to the reserved license of Paragraph 5.01 above, **PHS** reserves the right to grant nonexclusive **Research Licenses** directly or to require **Licensee** to grant nonexclusive **Research Licenses** in the **Licensed Field of Use**, on reasonable terms. The purpose of this **Research License** is to encourage basic research, whether conducted at an academic or corporate facility. In order to safeguard the **Licensed Patent Rights**, however, **PHS** shall consult with **Licensee** before granting to commercial entities a **Research License** in the **Licensed Field of Use** or providing to them research samples of materials made through the **Licensed Processes** for use in the **Licensed Field of Use**, except that **PHS** may not distribute such **Licensed Products** or materials provided to **PHS** by **Licensee** pursuant to Section 5.01.

5.05 In the event that **PHS** makes any filings or submissions such as an IND or NDA (or foreign equivalent) to the Food and Drug Administration (or foreign equivalent) in order to conduct clinical trials or seek regulatory approval of a **Licensed Product** in **Licensed Fields of Use**, **PHS** agrees to provide **Licensee** with an automatic right of reference to such filings, including all data, reports and documents submitted in connection therewith. **PHS** agrees to sign appropriate documentation to permit such reference and to promptly notify **Licensee** upon making such filings.

6. ROYALTIES AND REIMBURSEMENT

6.01 **Licensee** agrees to pay to **PHS** a noncreditable, nonrefundable license issue royalty as set forth in Appendix C within thirty (30) days from the date that this **Agreement** becomes effective.

6.02 **Licensee** agrees to pay to **PHS** a nonrefundable minimum annual royalty as set forth in Appendix C.

6.03 **Licensee** agrees to pay **PHS** earned royalties on **Net Sales** as set forth in Appendix C.

6.04 **Licensee** agrees to pay **PHS** benchmark royalties as set forth in Appendix C.

6.05 **Licensee** agrees to pay **PHS** sublicensing royalties as set forth in Appendix C.

6.06 A patent or patent application licensed under this **Agreement** shall cease to fall within the **Licensed Patent Rights** for the purpose of computing earned royalty payments in any given country on the earliest of the dates that a) the application has been abandoned and not continued, b) the patent expires or irrevocably lapses, or c) the claim has been held to be invalid or unenforceable by an unappealed or unappealable decision of a court of competent jurisdiction or administrative agency.

6.07 No multiple royalties shall be payable because any **Licensed Products** or **Licensed Processes** are covered by more than one of the **Licensed Patent Rights**.

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

6.08 On sales of **Licensed Products** by **Licensee** to sublicensees or on sales made in other than an arm's-length transaction, the value of the **Net Sales** attributed under this Article 6 to such a transaction shall be that which would have been received in an arm's-length transaction, based on sales of like quantity and quality products on or about the time of such transaction.

6.09 With regard to expenses associated with the preparation, filing, prosecution, and maintenance of all patent applications and patents included within the **Licensed Patent Rights** incurred by **PHS** prior to the effective date of this **Agreement**, **Licensee** shall pay to **PHS** [*] (which is [*] of total patent cost in Appendix A), as an additional royalty, within thirty (30) days from the date that this **Agreement** becomes effective. In addition, **Licensee** shall pay to **PHS** another [*] within thirty (30) days from the date that an NDA has been filed.

6.10 With regard to expenses associated with the preparation, filing, prosecution, and maintenance of all patent applications and patents included within the **Licensed Patent Rights** incurred by **PHS** on or after the effective date of this **Agreement**, **PHS**, at its sole option, may require **Licensee**:

(a) To pay **PHS** on an annual basis, within sixty (60) days of **PHS**'s submission of a statement and request for payment, a royalty amount equivalent to all such patent expenses incurred during the previous calendar year(s) for the **Licensed Patent Rights** corresponding to those listed in Appendix A, divided equally among all commercialization licensees of the **Licensed Patent Rights** corresponding to those listed in Appendix A, as applicable, that are on record as of the date on which the statement and request for payment are sent by **PHS** to **Licensee**,

and limited specifically to those commercialization license(s) under which licensee(s) are responsible for paying a share of patent expenses, and specifically excluding any license(s) which are for internal research use and/or for research reagent sales; or

(b) To pay such expenses directly to the law firm employed by **PHS** to handle such functions. However, in such event, **PHS** and not **Licensee** shall be the client of such law firm.

In no instance shall the amount due from **Licensee** be more than [*] as patent cost payment per year.

Under exceptional circumstances, **Licensee** may be given the right to assume responsibility for the preparation, filing, prosecution, or maintenance of any patent application or patent included with the **Licensed Patent Rights**. In that event, **Licensee** shall directly pay the attorneys or agents engaged to prepare, file, prosecute, or maintain such patent applications or patents and shall provide to **PHS** copies of each invoice associated with such services as well as documentation that such invoices have been paid.

6.11 In the event that **PHS** provides exclusive or nonexclusive commercialization licenses to more than two (2) licensees under the **Licensed Patent Rights** corresponding to any specific patents and/or patent applications to any additional licensee(s), limited specifically to those commercialization license(s) under which licensee(s) are responsible for paying a share of patent expenses, and specifically excluding any license(s) which are for internal research use and/or for research reagent sales, **Licensee** shall receive as a credit a proportional share of any and all patent expenses previously paid or due by **Licensee** under Paragraphs 6.09 and 6.10 of this **Agreement** for those specific patents and/or patent applications, based upon a proportional reallocation of patent expenses among all exclusive or nonexclusive commercialization licensees as specified in this Paragraph 6.10. **PHS** will notify **Licensee** within ninety (90) of grant of any additional licenses under the **Licensed Patent Rights**, and the credit described in this Paragraph 6.11 shall be applied against **Licensee's** next invoice for its share of any current and/or future patent expenses payable under Paragraphs 6.09 and 6.10, minimum annual royalties, and/or earned royalties.

6.12 **Licensee** may elect to surrender its rights in any country of the **Licensed Territory** under any **Licensed Patent Rights** upon ninety (90) days written notice to **PHS** and owe no payment obligation under Article 6.10 for patent-related expenses incurred in that country after ninety (90) days of the effective date of such written notice.

7. PATENT FILING, PROSECUTION, AND MAINTENANCE

7.01 **PHS** agrees to take responsibility for, but to consult with the **Licensee** in the preparation, filing, prosecution, and maintenance of any and all patent applications or patents included in the **Licensed Patent Rights** and shall furnish, upon execution of this **Agreement** and on a continuous basis thereafter as long as the **Agreement** is in effect, copies of relevant patent-related documents to **Licensee**, including all drafts of patent applications filings, domestic and foreign, amendments thereto, related correspondence and other related documents, sufficiently in advance to allow **Licensee** to comment thereon prior to filing or submission and at least fourteen (14) days in advance if possible. During the term of this **Agreement**, **PHS** shall never allow other licensees to assume responsibility for the preparation, filing prosecution and maintenance of the **Licensed Patent Rights** without consultation with and prior approval of **Licensee**.

7.02 Each party shall promptly inform the other as to all matters that come to its attention that may materially affect the preparation, filing, prosecution, or maintenance of the **Licensed Patent Rights** and **PHS** shall permit **Licensee** to provide comments and suggestions with respect to the preparation, filing, prosecution, and maintenance of **Licensed Patent Rights** in both the United States and foreign countries, and **PHS** shall consider all reasonable comments and suggestions of **Licensee**.

8. RECORD KEEPING

8.01 **Licensee** agrees to keep accurate and correct records of **Licensed Products** made, used, sold, or imported and **Licensed Processes** practiced under this **Agreement** appropriate to determine the amount of royalties due **PHS**. Such records shall be retained for at least five (5) years following a given reporting period and shall be available during normal business hours for an annual inspection at the expense of **PHS** by an accountant or other designated auditor selected by **PHS** and reasonably acceptable to **Licensee** for the sole purpose of verifying reports and payments hereunder. The accountant or auditor shall execute a reasonable confidentiality agreement with **Licensee** and shall only disclose to **PHS** information relating to the accuracy of reports and payments made under this Agreement. If an inspection shows an underreporting or underpayment in excess of five percent (5%) for any twelve (12) month period, then **Licensee** shall reimburse PHS for the cost of the inspection at the time **Licensee** pays the unreported royalties, including any late charges as required by Paragraph 9.08 of this Agreement. All payments required under this Paragraph shall be due within thirty (30) days of the date **PHS** provides Licensee notice of the payment due. If the inspection shows an overpayment by **Licensee**, then **Licensee** will credit the overpayment to future royalty payments. However in no event shall royalties paid **PHS** be less than the minimum annual royalty.

8.02 **Licensee** agrees to have an audit of **Net Sales** and royalties conducted by an independent auditor at least every two (2) years if annual royalty-bearing sales of the **Licensed Product** or **Licensed Processes** performed for third parties are over [*]. The audit shall address, at a minimum, the amount of gross sales by or on behalf of **Licensee** during the audit period, terms of the license as to percentage or fixed royalty to be remitted to the **Government**, the amount of royalty funds owed to the **Government** under this **Agreement**, and whether the royalty amount owed has been paid to the **Government** and is reflected in the records of the **Licensee**. The audit shall also indicate the **PHS** license number, product, and the time period being audited. A report certified by the auditor shall be submitted promptly by the auditor directly to **PHS** on completion. **PHS** shall pay for the entire cost of the audit. If an inspection shows an underreporting or underpayment in excess of [*] for any 12 month period, then **Licensee** shall reimburse **PHS** for cost of the audit at

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

the time Licensee pays the unreported royalties, including late charges as required by Paragraph 9.08 of this **Agreement**. All payments required under this Paragraph shall be due within thirty (30) days of the date **PHS** provides **Licensee** notice of the payment due. If the

inspection shows an overpayment by **Licensee**, then **Licensee** will credit the overpayment to future royalty payments, however in no event shall royalties paid **PHS** be less than the minimum annual royalty.

9. REPORTS ON PROGRESS, BENCHMARKS, SALES, AND PAYMENTS

9.01 Prior to signing this **Agreement**, **Licensee** has provided to **PHS** the **Commercial Development Plan** at Appendix F, under which **Licensee** intends to bring the subject matter of the **Licensed Patent Rights** to the point of **Practical Application**. This **Commercial Development Plan** is hereby incorporated by reference into this **Agreement**. Based on this plan, performance **Benchmarks** have been determined and set forth in Appendix E.

9.02 **Licensee** shall provide written annual reports on its product development progress or efforts to commercialize under the **Commercial Development Plan** for the **Licensed Field of Use** within ninety (90) days after December 31 of each calendar year. These progress reports shall include, but not be limited to: progress on research and development, status of applications for regulatory approvals, manufacturing, sublicensing, marketing, importing, and sales during the preceding calendar year, as well as plans for the present calendar year. **PHS** also encourages these reports to include information on any of **Licensee**'s public service activities that relate to the **Licensed Patent Rights**. If reported progress differs from that projected in the **Commercial Development Plan** and **Benchmarks**, **Licensee** shall explain the reasons for such differences. In any such annual report, **Licensee** may propose amendments to the **Commercial Development Plan**, acceptance of which by **PHS** may not be denied unreasonably. **Licensee** agrees to provide any additional information reasonably required by **PHS** to evaluate **Licensee**'s performance under this **Agreement**. **Licensee** may amend the **Benchmarks** at any time upon written consent by **PHS**. **PHS** shall not unreasonably withhold approval of any request of **Licensee** to extend the time periods of this schedule if such request is supported by a reasonable showing by **Licensee** of diligence in its performance under the **Commercial Development Plan** and toward bringing the **Licensed Products** to the point of **Practical Application** as defined in 37 CFR 404.3(d). **Licensee** shall amend the **Commercial Development Plan** and **Benchmarks** at the request of **PHS** to address any **Licensed Field of Use** not specifically addressed in the plan originally submitted.

9.03 **Licensee** shall report to **PHS** the dates for achieving **Benchmarks** specified in Appendix E and the **First Commercial Sale** in each country in the **Licensed Territory** within thirty (30) days of such occurrences.

9.04 Commencing with the **First Commercial Sale** by **Licensee** or a sublicensee, **Licensee** shall submit to **PHS** within ninety (90) days after each calendar half-year ending June 30 and December 31 a royalty report setting forth for the preceding half-year period the amount of the **Licensed Products** sold or **Licensed Processes** practiced by or on behalf of **Licensee** in each country within the **Licensed Territory**, the **Net Sales**, if any, and payments from sublicensees on which a royalty payment is owed to **PHS**, if any, and the amount of royalty accordingly due. With each such royalty report, **Licensee** shall submit payment of the earned royalties due. If no earned royalties are due to **PHS** for any reporting period, the written report shall so state. The royalty report shall be certified as correct by an authorized officer of **Licensee** and shall include a detailed listing of all deductions made under Paragraph 2.10 to determine **Net Sales** made under Article 6 to determine royalties due.

9.05 **Licensee** agrees to forward semi-annually to **PHS** a copy of such reports received by **Licensee** from its sublicensees during the preceding half-year period as shall be pertinent to a royalty accounting to **PHS** by **Licensee** for activities under the sublicense.

9.06 Royalties due under Article 6 shall be paid in U.S. dollars. For conversion of foreign currency to U.S. dollars, the conversion rate shall be the New York foreign exchange rate quoted in *The Wall Street Journal* on the day that the payment is due. All checks and bank drafts shall be drawn on United States banks and shall be payable, as appropriate, to "NIH/Patent Licensing." All such payments shall be sent to the following address: NIH, P.O. Box 360120, Pittsburgh, PA 15251-6120. Any loss of exchange, value, taxes, or other expenses incurred in the transfer or conversion to U.S. dollars shall be borne or paid entirely by **Licensee**. The royalty report required by Paragraph 9.04 of this **Agreement** shall accompany each such payment, and a copy of such report shall also be mailed to **PHS** at its address for notices indicated on the Signature Page of this **Agreement**.

9.07 **Licensee** shall be solely responsible for determining if any tax on royalty income is owed outside the United States and shall pay any such tax and be responsible for all filings with appropriate agencies of foreign governments.

9.08 Interest and penalties may be assessed by **PHS** on any overdue payments in accordance with the Federal Debt Collection Act. The payment of such late charges shall not prevent **PHS** from exercising any other rights it may have as a consequence of the lateness of any payment.

9.09 All plans and reports required by this Article 9 and marked "confidential" by **Licensee** shall, to the extent permitted by law, be treated by **PHS** as commercial and financial information obtained from a person and as privileged and confidential, and any proposed disclosure of such records by the **PHS** under the Freedom of Information Act (FOIA), 5 U.S.C. § 552 shall be subject to the predisclosure notification requirements of 45 CFR § 5.65(d).

10. PERFORMANCE

10.01 **Licensee** shall use commercially reasonable efforts to bring the **Licensed Products** and **Licensed Processes** to **Practical Application**. "Commercially reasonable efforts" for the purposes of this provision shall include adherence by **Licensee** to the **Commercial Development Plan** at Appendix F and performance of the **Benchmarks** at Appendix E. For purposes of this Article 10, **Licensee's** efforts shall be deemed to include the efforts of its sublicensees.

10.02 Upon the **First Commercial Sale**, until the expiration of this **Agreement**, **Licensee** shall use commercially reasonable efforts to make **Licensed Products** and **Licensed Processes** reasonably accessible to the United States public. For the purposes of this Article 10, **Licensee's** efforts shall be deemed to include the efforts of its sublicensees.

11. INFRINGEMENT AND PATENT ENFORCEMENT

11.01 **PHS** and **Licensee** agree to notify each other promptly of each infringement of the **Licensed Patent Rights** in the **Licensed Field of Use**; as well as any material facts which may affect the validity, scope or enforceability of the **Licensed Patent Rights**, in each case, of which either party becomes aware.

11.02 Pursuant to this **Agreement** and the provisions of Chapter 29 of title 35, United States Code, **Licensee** may, not withstanding the existence of any other license grants by **PHS** under the **Licensed Patent Rights**: a) bring suit in its own name, at its own expense, and on its own behalf for infringement of the **Licensed Patent Rights** in the **Licensed Field of Use**; b) in any such suit, enjoin infringement and collect for its use, damages, profits, and awards of whatever nature recoverable for such infringement; and c) settle any claim or suit for infringement of the **Licensed Patent Rights** provided, however, that **PHS** and appropriate **Government** authorities shall have the first right to take such actions at their own expense. If **Licensee** desires to initiate a suit for patent infringement, **Licensee** shall notify **PHS** in writing. If **PHS** does not notify **Licensee** of its intent to pursue legal action within ninety (90) days, **Licensee** will be free to initiate suit. **PHS** shall have a continuing right to intervene in such suit at its own expense. **Licensee** shall take no

action to compel the **Government** either to initiate or to join in any such suit for patent infringement. However, in the event that **Licensee** is forced to take action in order to maintain such suit, then any such action by **Licensee** shall not be considered to be a material breach of this **Agreement**. Should the **Government** be made a party to any such suit by motion or any other action of **Licensee**, **Licensee** shall reimburse the **Government** for any costs, expenses, or fees which the **Government** incurs as a result of such motion or other action, including any and all costs incurred by the **Government** in opposing any such motion or other action. In all cases, **Licensee** agrees to keep **PHS** reasonably apprised of the status and progress of any litigation. Before **Licensee** commences an infringement action, **Licensee** shall notify **PHS** and give careful consideration to the views of **PHS** and to any potential effects of the litigation on the public health in deciding whether to bring suit. **PHS** shall advise all other licensees under the **Licensed Patent Rights** of any litigation pursuant to this Paragraph and of **Licensee's** request that they join said litigation, at **Licensee's** expense, if necessary in order for the **Licensee** to have standing to bring or to maintain such litigation. In the event that **Licensee** is not able to maintain a lawsuit because the necessary parties do not participate, all royalty obligations under this Agreement shall be reduced as described in Appendix C.

11.03 In the event that a declaratory judgment action alleging invalidity or non-infringement of any of the **Licensed Patent Rights** shall be brought against **Licensee** or raised by way of counterclaim or affirmative defense in an infringement suit brought by **Licensee** under Paragraph 11.02, pursuant to this **Agreement** and the provisions of Chapter 29 of Title 35, United States Code or other statutes, **Licensee** may, after consultation with other exclusive licensees of **Licensed Patent Rights**: a) defend the suit in its own name, at its own expense, and on its own behalf for the **Licensed Patent Rights**; b) in any such suit, ultimately to enjoin infringement and to collect for its use, damages, profits, and awards of whatever nature recoverable for such infringement; and c) settle any claim or suit for declaratory judgment involving the **Licensed Patent Rights**-provided, however, that **PHS** and appropriate **Government** authorities shall have the first right to take such actions and shall have a continuing right to intervene in such suit at their own expense. If **PHS** does not notify **Licensee** of its intent to respond to the legal action within a reasonable time, **Licensee** will be free to do so. **Licensee** shall take no action to compel the **Government** either to initiate or to join in any such declaratory judgment action, however, any such action by **Licensee** shall not be considered to be a material breach of this **Agreement**. Should the **Government** be made a party to any such suit by motion or any other action of **Licensee**, **Licensee** shall reimburse the **Government** for any costs, expenses, or fees which the **Government** incurs as a result of such motion or other action. If **Licensee** elects not to defend against such declaratory judgment action, **PHS**, at its option, may do so at its own expense. In all cases, **Licensee** agrees to keep **PHS** reasonably apprised of the status and progress of any litigation. Before **Licensee** commences an infringement action, **Licensee** shall notify **PHS** and give careful consideration to the views of **PHS** and to any potential effects of the litigation on the public health in deciding whether to bring suit. **PHS** shall advise all other licensees under the **Licensed Patent Rights** of any litigation pursuant to this Paragraph and of **Licensee's** request that they join said litigation, at **Licensee's** expense, if necessary in order for the **Licensee** to have standing to bring or to maintain such litigation. Also, if **PHS** grants the right to litigate under this Paragraph to any other licensee of **Licensed Patent Rights**, such license shall provide an opportunity for **Licensee** to consult in advance with **PHS** and such other licensee before suit is brought and before any settlement is reached that might affect **Licensee's** rights under this **Agreement**.

11.04 In any action under Paragraphs 11.02 or 11.03, the expenses including costs, fees, attorney fees, and disbursements, shall be paid by **Licensee**. The value of any recovery made by **Licensee** through court judgment or settlement, after deduction of said expenses, shall be treated as **Net Sales** and subject to earned royalties.

11.05 **PHS** shall cooperate fully with **Licensee** in connection with any action under Paragraphs 11.02 or 11.03. **PHS** agrees promptly to provide access to all necessary documents and to render reasonable assistance in response to a request by **Licensee**.

12. NEGATION OF WARRANTIES AND INDEMNIFICATION

12.01 **PHS** offers no warranties other than those specified in Article 1.

12.02 **PHS** does not warrant the validity of the **Licensed Patent Rights** and makes no representations whatsoever with regard to the scope of the **Licensed Patent Rights**, or that the **Licensed Patent Rights** may be exploited without infringing other patents or other intellectual property rights of third parties. However, **PHS** represents that it has complied with the duty of disclosure at the U.S. Patent and Trademark Office and that it is unaware of any facts or reasons why the **Licensed Patent Rights** would not be valid.

12.03 **PHS** MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF ANY SUBJECT MATTER DEFINED BY THE CLAIMS OF THE **LICENSED PATENT RIGHTS** OR TANGIBLE MATERIALS RELATED THERETO.

12.04 **PHS** does not represent that it will commence legal actions against third parties infringing the **Licensed Patent Rights**.

12.05 **Licensee** shall indemnify and hold **PHS**, its employees, students, fellows, agents, and consultants harmless from and against all liability, demands, damages, expenses, and losses, including but not limited to death, personal injury, illness, or property damage in connection with or arising out of: a) the use by or on behalf of **Licensee**, its sublicensees, directors, employees, or third parties under contract to **Licensee** of any **Licensed Patent Rights**; or b) the design, manufacture, distribution, or use of any **Licensed Products**, **Licensed Processes** or materials by **Licensee**, or other products or processes developed in connection with or arising out of the **Licensed Patent Rights**. **Licensee** agrees to

maintain a liability insurance program consistent with sound business practice. Notwithstanding any other provision to the contrary, **Licensee** shall have no indemnification obligation in connection with or arising out of: (a) the use by or on behalf of the indemnified parties identified above of any **Licensed Product** or **Licensed Process** for experimental or research purposes, or (b) the design, manufacture, distribution or use of any **Licensed Product** or **Licensed Process** by or on behalf of such indemnified parties for experimental or research purposes.

13. TERM, TERMINATION, AND MODIFICATION OF RIGHTS

13.01 This **Agreement** is effective when signed by all parties and shall extend on a country-by-country basis to the expiration of the last to expire of the **Licensed Patent Rights** in each country unless sooner terminated as provided in this Article 13.

13.02 In the event that **Licensee** is in default in the performance of any material obligations under this **Agreement**, including but not limited to the obligations listed in Article 13.05, and if the default has not been remedied within ninety (90) days after the date of notice in writing of such default, **PHS** may terminate this **Agreement** by written notice and pursue outstanding amounts owed through procedures provided by the Federal Debt Collection Act.

13.03 In the event of the commencement of a bankruptcy proceeding by or against **Licensee** under the Bankruptcy Code that is not dismissed within ninety (90) days after it is filed, **PHS** may, at its option, terminate this **Agreement**. In the event of a bankruptcy of **Licensee** (unless **PHS** has already terminated this **Agreement**), all rights to **Licensed Patent Rights** granted to **Licensee** under this **Agreement** to the extent same survive prior to filing of such bankruptcy are, and shall be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code, as amended from time to time (the "Bankruptcy code"), licenses of right to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The Parties agree that **Licensee**, as a

licensee of such rights under this **Agreement**, shall retain and may fully exercise all its rights and elections under the Bankruptcy Code.

13.04 **Licensee** shall have a unilateral right to terminate this **Agreement** and/or any licenses in any country or territory by giving **PHS** sixty (60) days written notice to that effect.

13.05 **PHS** shall specifically have the right to terminate or modify, at its option, this **Agreement**, if **PHS** determines that the **Licensee**: 1) is not executing the **Commercial Development Plan** submitted with its request for a license and the **Licensee** cannot otherwise demonstrate to **PHS**'s reasonable satisfaction that the **Licensee** has taken, or can be expected to take within a reasonable time, effective steps to achieve **Practical Application** of the **Licensed Products** or **Licensed Processes**; 2) has not achieved the **Benchmarks** as may be modified under Paragraph 9.02; 3) has willfully made a false statement of, or willfully omitted, a material fact in the license application or in any report required by the **Agreement**; 4) has committed a material breach of a covenant or agreement contained in the **Agreement**; 5) is not keeping **Licensed Products** or **Licensed Processes** reasonably available to the public after commercial use commences; 6) cannot reasonably satisfy unmet health and safety needs within the **Licensed Field of Use** or 7) cannot reasonably justify a failure to comply with the domestic production requirement of Paragraph 5.02 unless waived. In making this determination, **PHS** will take into account the normal course of such commercial development programs conducted with sound and reasonable business practices and judgment and the annual reports submitted by **Licensee** under Paragraph 9.02. Prior to invoking its rights under this Paragraph 13.05 upon any of the triggers described in items 1) through 7) above, **PHS** shall give written notice to **Licensee** providing **Licensee** specific notice of, and a ninety (90) day opportunity to respond to, **PHS**'s concerns as to the previous items 1) through 7). If **Licensee** fails to alleviate **PHS**'s concerns as to the previous items 1) through 7) during such 90-day period or fails to initiate corrective action to **PHS**'s satisfaction during such 90-day period, **PHS** may terminate this **Agreement**.

13.06 When the public health and safety so require, and after written notice to **Licensee** providing **Licensee** a ninety (90) day opportunity to respond, **PHS** shall have the right to require **Licensee** to grant sublicenses to responsible applicants, on reasonable terms, in the **Licensed Field of Use** under the **Licensed Patent Rights**, unless **Licensee** can reasonably demonstrate that the granting of the sublicense would not materially increase the availability to the public of the subject matter of the **Licensed Patent Rights**. **PHS** will not require the granting of a sublicense unless the responsible applicant has first negotiated in good faith with **Licensee**. If **Licensee** is required to grant sublicense(s) under this Paragraph 13.06, **Licensee** agrees to provide **PHS** and said sublicensee(s) with all data, documents and materials generated or produced by or on behalf of **Licensee** that would be or could be used in regulatory filings with the Food and Drug Administration (or foreign equivalent regulatory agency). **Licensee** agrees that such data, documents and/or materials can be used by **PHS** or said sublicensee(s) to prepare regulatory filings with the Food and Drug Administration (or equivalent foreign regulatory agencies). **Licensee** may charge a fee to said sublicensee(s) that is equal to its direct costs only (i.e., no overhead shall be compensated) for producing said data, documents and materials that said sublicensee(s) actually use in their regulatory filings.

13.07 **PHS** reserves the right according to 35 U.S.C. § 209(f)(4) to terminate or modify this **Agreement** if it is determined that such action is necessary to meet requirements for public use specified by federal regulations issued after the date of this **Agreement** and such requirements are not reasonably satisfied by **Licensee**.

13.08 Within thirty (30) days of receipt of written notice of **PHS**'s unilateral decision to modify or terminate this **Agreement** pursuant to the express provisions in this **Agreement**, **Licensee** may, consistent with the provisions of 37 CFR 404.11, appeal the decision by written submission to the designated **PHS** official. The decision of the designated **PHS** official shall be the final agency

decision. **Licensee** may thereafter exercise any and all administrative or judicial remedies that may be available.

13.09 Within ninety (90) days of expiration or termination of this **Agreement** under this Article 13, a final report, as per Paragraphs 9.02, 9.04 and 9.05, shall be submitted by **Licensee**. Any royalty payments, including those incurred but not yet paid (such as the full minimum annual royalty), and those related to patent expense, due to **PHS** shall become immediately due and payable upon termination or expiration. If terminated under this Article 13, sublicensees may elect to convert their sublicenses to direct licenses with **PHS** pursuant to Paragraph 4.03. Unless otherwise specifically provided for under this **Agreement**, upon termination or expiration of this **Agreement**, **Licensee** shall return

all **Licensed Products** or other materials included within the **Licensed Patent Rights** to **PHS** or provide **PHS** with certification of the destruction thereof.

13.10 In the event **Licensee** unilaterally terminates this **Agreement** under Paragraph 13.04 or this **Agreement** is terminated for cause by **PHS** under Paragraphs 13.02, 13.03 or 13.05, **Licensee** agrees to provide **PHS** with all data, documents and materials generated or produced by or on behalf of **Licensee** that would be or could be used in regulatory filings with the Food and Drug Administration (or foreign equivalent regulatory agencies). **Licensee** agrees that such data, documents and/or materials can be used by **PHS** or future third party licensee(s) of **Licensed Patent Rights** to prepare regulatory filings with the Food and Drug Administration (or equivalent foreign regulatory agencies).

14. GENERAL PROVISIONS

14.01 Neither Party may waive or release any of its rights or interests in this **Agreement** except in writing. The failure of either the **Licensee** or the **Government** 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 by either the **Licensee** or the **Government** or excuse a similar subsequent failure to perform any such term or condition by either party.

14.02 This **Agreement** constitutes the entire agreement between the Parties relating to the subject matter of the **Licensed Patent Rights**, and all prior negotiations, representations, agreements, and understandings are merged into, extinguished by, and completely expressed by this **Agreement**.

14.03 The provisions of this **Agreement** are severable, and in the event that any provision of this **Agreement** shall be determined to be invalid or unenforceable under any controlling body of law, such determination shall not in any way affect the validity or enforceability of the remaining provisions of this **Agreement**.

14.04 If either Party desires a modification to this **Agreement**, the Parties shall, upon reasonable notice of the proposed modification by the Party desiring the change, confer in good faith to determine the desirability of such modification. No modification will be effective until a written amendment is signed by the signatories to this **Agreement** or their designees.

14.05 The construction, validity, performance, and effect of this **Agreement** shall be governed by Federal law as applied by the Federal courts in the District of Columbia.

14.06 All notices required or permitted by this **Agreement** shall be given by prepaid, first class, registered or certified mail or by an express/overnight delivery service provided by a commercial carrier, properly addressed to the other Party at the address designated on the following Signature Page, or to such other address as may be designated in writing by such other Party. Notices shall be considered timely if such notices are received on or before the established deadline date or sent on or before the deadline date as verifiable by U.S. Postal Service postmark or dated receipt from a commercial carrier. Parties should request a legibly dated U.S. Postal Service postmark or obtain a dated receipt from a commercial carrier or the U.S. Postal Service.

14.07 This **Agreement** shall not be assigned by **Licensee** except: a) with the prior written consent of **PHS**, such consent not to be withheld unreasonably; b) as part of a sale or transfer of substantially the entire business of **Licensee** relating to operations which concern this **Agreement**; or c) in connection with a merger, consolidation or reorganization. **Licensee** shall notify **PHS** within ten (10) days of any assignment of this **Agreement** by **Licensee**.

14.08 **Licensee** agrees in its use of any **PHS**-supplied materials to comply with all applicable statutes, regulations, and guidelines, including **PHS** and **DHHS** regulations and guidelines. **Licensee** agrees not to use the materials for research involving human subjects or clinical trials in the United States without complying with 21 CFR Part 50 and 45 CFR Part 46. **Licensee** agrees not to use the materials for research involving human subjects or clinical trials outside of the United States without notifying **PHS**, in writing, of such research or trials and complying with the applicable regulations of the appropriate national control authorities. Written notification to **PHS** of research involving human subjects or clinical trials outside of the United States shall be given no later than sixty (60) days prior to commencement of such research or trials.

14.09 **Licensee** acknowledges that it is subject to and agrees to abide by the United States laws and regulations (including the Export Administration Act of 1979 and Arms Export Control Act) controlling the export of technical data, computer software, laboratory prototypes, biological material, and other commodities. The transfer of such items may require a license from the cognizant Agency of the U.S. **Government** or written assurances by **Licensee** that it shall not export such items to certain foreign countries without prior approval of such agency. **PHS** neither represents that a license is or is not required or that, if required, it shall be issued.

14.10 **Licensee** agrees to mark the **Licensed Products** or their packaging sold in the United States with all applicable U.S. patent numbers and similarly to indicate “Patent Pending” status. All **Licensed Products** manufactured in, shipped to, or sold in other countries shall be marked in such a manner as to preserve **PHS** patent rights in such countries.

14.11 By entering into this **Agreement**, **PHS** does not directly or indirectly endorse any product or service provided, or to be provided, by **Licensee** whether directly or indirectly related to this **Agreement**. **Licensee** shall not state or imply that this **Agreement** is an endorsement by the **Government**, **PHS**, any other **Government** organizational unit, or any **Government** employee. Additionally, **Licensee** shall not use the names of NIH, CDC, **PHS**, or **DHHS** or the **Government** or their employees in any advertising, promotional, or sales literature without the prior written consent of **PHS**. **Licensee** may publicly identify the existence of this **Agreement** and is not prohibited from using publicly available factual information regarding **Licensed Patent Rights**, **Licensed Products**, and **Licensed Processes**, specifically including, but not limited to, the names of the inventors as appearing on the **Licensed Patent Rights** and their associated NIH institutes, without such consent.

14.12 The Parties agree to attempt to settle amicably any controversy or claim arising under this **Agreement** or a breach of this **Agreement**, except for appeals of modifications or termination decisions provided for in Article 13. **Licensee** agrees first to appeal any such unsettled claims or controversies to the designated **PHS** official, or designee, whose decision shall be considered the final agency decision. Thereafter, **Licensee** may exercise any administrative or judicial remedies that may be available.

14.13 Nothing relating to the grant of a license, nor the grant itself, shall be construed to confer upon any person any immunity from or defenses under the antitrust laws or from a charge of patent misuse, and the acquisition and use of rights pursuant to 37 CFR Part 404 shall not be immunized from the operation of state or Federal law by reason of the source of the grant.

14.14 Paragraphs 4.03, 8.01, 9.05-9.07, 12.01-12.05, 13.08, 13.09, and 14.12 of this **Agreement** shall survive termination of this **Agreement**.

SIGNATURES BEGIN ON NEXT PAGE

PHS PATENT LICENSE AGREEMENT—*EXCLUSIVE*

SIGNATURE PAGE

For **PHS**:

Steven M. Ferguson, M.B.A. Date
Acting Director, Division of Technology Development and Transfer
Office of Technology Transfer
National Institutes of Health

Mailing Address for Notices:

Office of Technology Transfer
National Institutes of Health
6011 Executive Boulevard, Suite 325
Rockville, Maryland 20852-3804 U.S.A.

For **Licensee** (Upon, information and belief, the undersigned expressly certifies or affirms that the contents of any statements of **Licensee** made or referred to in this document are truthful and accurate.):

by:

Signature of Authorized Official Date

Anne-Marie Corner
Printed Name

President and CEO
Title

Official and Mailing Address for Notices:

CEO
Biosyn, Inc.
1800 Byberry Road, Building 13
Huntingdon Valley, PA 19006-3525

Any false or misleading statements made, presented, or submitted to the **Government**, including any relevant omissions, under this **Agreement** and during the course of negotiation of this **Agreement** are subject to all applicable civil and criminal statutes including Federal statutes 31 U.S.C. §§ 3801-3812 (civil liability) and 18 U.S.C. § 1001 (criminal liability including fine(s) and/or imprisonment).

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

APPENDIX A—Patent(s) or Patent Application(s)

Patent(s) or Patent Application(s):

1. U.S. Patent No. 5,843,882, filed April 27, 1995 from USSN 08/429,965, issued December 1, 1998, entitled: "Antiviral Proteins and Peptides, DNA, DNA-coding Sequences Therefor, and Uses Thereof" (Inventors: Michael R. Boyd, Kirk R. Gustafson, Robert H. Shoemaker and James B. McMahon) (**E-117-95/0**)

2. U.S. Patent No. 5,821, 081, filed April 26, 1996 from USSN 08/638,610, issued October 13, 1998, entitled: "Nucleic Acids Encoding Antiviral Proteins and Peptides, Vectors and Host Cells Comprising Same, and Methods of Producing the Antiviral Proteins and Peptides" (Inventors: Michael R. Boyd, Kirk R. Gustafson, Robert H. Shoemaker and James B. McMahon) (E-**117-95/1**)

3. U.S. Patent No. 5,962,653, filed Nov. 13, 1997, issued Oct. 05, 1999, from SN 08/969,584 (DIV of SN 08/429,965 E-117-95/0), entitled: "Methods of Obtaining Antiviral Proteins and Antiviral Peptides from Nostoc Ellipsosporum" (Inventors: Michael R. Boyd and Kirk R. Gustafson) (**E-117-95/2**)

4. U.S. Patent No. 6,015,876, filed November 13, 1997 from USSN 08/969,378, issued January 18, 2000, entitled: "Method of Using Cyanovirins" (Inventor: Michael R. Boyd) (**E-117-95/3**)

5. U.S. Patent No. 5,962,668, filed Nov. 13, 1997, issued Oct. 05, 1999, from SN 08/970,179 (DIV of SN 08/638,610, E-117-95/1), entitled: " Nucleic Acid Encoding Antiviral Proteins and Peptides Fused to Effector Proteins" (Inventors: Michael R. Boyd and Robert H. Shoemaker) (**E-117-95/4**)

[*]

7. U.S. Patent No. 5,998,587, filed November 13, 1997 from USSN 08/969,249, issued December 7, 1999, entitled: "Anti-cyanovirin Antibody " (Inventors: Michael R. Boyd, Kirk R. Gustafson, Robert H. Shoemaker and James B. McMahon) (**E-117-95/6**)

8. U. S. Patent No. 6,245,737, filed Aug. 19, 1998, issued Jun. 12, 2001,from SN 09/137,134 (CON of SN 08/429,965, E-117-95/0), entitled: " Conjugates of Antiviral Proteins or Peptides and Virus or Viral Envelope Glycoportiens" (Inventors: Michael R. Boyd, Kirk R. Gustafson, Robert H. Shoemaker and James B. McMahon) (**E-117-95/7**)

[*]

10. U.S. Patent No. 6,428,790, filed October 12, 1999, entitled: "Cyanovirin Conjugates and Matrix-Anchored Cyanovirin and Related Compositions and Methods of Use" (Inventor: Michael R. Boyd) (**E-074-99/1**)

[*]

12. U.S. Patent Application 09/427,873, filed October 27, 1999, entitled: "Methods of Using Cyanovirins to Inhibit Viral Infection" (Inventor: Michael R. Boyd) (**E-074-99/3**)

[*]

14. U.S. Patent Application 09/815,079, filed March 22, 2001, entitled: "Glycosylation-Resistant Cyanovirins and Related Conjugates, Compositions, Nucleic Acids, Vectors, Host Cells, Methods of Production and methods of Using Nonglycosylated Cyanovirins" (Inventor: Michael R. Boyd) (**E-074-99/7**)

APPENDIX B—Licensed Field of Use and Territory

Licensed Fields of Use:

Compositions, devices and methods for the prevention of infection by HIV and other sexually transmitted pathogens, by topical, but not systemic, administration, utilizing cyanovirin-N, anti-HIV mutants of cyanovirin-N, including glycosylation-resistant mutants of cyanovirin-N, and anti-HIV fragments of both, including conjugated forms of cyanovirin-N, mutants of cyanovirin-N, and anti-HIV fragments of both, to increase the in vivo half-life, but excluding pegylated cyanovirin-N, pegylated mutants of cyanovirin-N, and pegylated anti-HIV fragments of both. For the avoidance of doubt, such compositions shall include sustained release formulations; devices shall include all drug delivery systems, including but not limited to condoms, sponges, vaginal rings, suppositories, IUDs and other solid matrices; and topical administration shall include administration to mucosal membranes, including vaginal, anal and oral membranes.

Licensed Territory:

Worldwide

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

APPENDIX C—Royalties

Royalties:

Licensee agrees to pay to **PHS** a noncreditable, nonrefundable license issue royalty in the amount of [*].

Licensee agrees to pay to **PHS** a nonrefundable minimum annual royalty in the amounts as follows: [*], starting [*]; [*] starting [*] and [*] starting [*], after [*].

Licensee agrees to pay **PHS** earned royalties on **Net Sales** by or on behalf of **Licensee** as follows:

1. [*]:

[*]

[*]

[*]

2. [*]

[*]

[*]

[*]

3. [*]

[*]

[*]

4. [*]

[*]

[*]

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

Licensee agrees to pay **PHS** the following one-time only benchmark royalties:

1. [*] payable within sixty (60) days of [*].

2. [*] payable within sixty (60) days [*].

3. [*] payable within ninety (90) days after [*]

4. [*] payable within ninety (90) days after [*].

Licensee agrees to pay **PHS** sublicensing royalties, within ninety (90) days of receipt by **Licensee**, as follows:

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

1. **Licensee** agrees to pay **PHS** earned royalties on **Net Sales** by sublicensee(s):

a) [*]

[*]

[*]

[*]

b) [*]

[*]

[*]

[*]

[*]

2. **Licensee** agrees to pay **PHS** additional sublicensing royalties as follows:

[*]

APPENDIX D—Modifications

Modifications are included in the main text of this **License Agreement.**

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

APPENDIX E—Benchmarks and Performance

Licensee agrees to the following **Benchmarks** for its performance under this **Agreement** and, within thirty (30) days of achieving a **Benchmark**, shall notify **PHS** that the **Benchmark** has been achieved.

1. [*]

2. [*]

3. [*]

4. [*]

5. [*]

6. Developing World Access

It is **Licensee's** intent to provide **Licensed Product(s)** to the **Public Sector** in the quantity desired by the **Public Sector** and at the price described below. **License** therefore agrees:

a) To provide a written report to **PHS**, within six months of a **Licensed Product** being approved for marketing in the U.S. or Europe detailing the potential **Public Sector** requirement for **Licensed Product(s)** to fulfill the public health need in **Developing Countries**, said report shall include the effect of any approved competing products being offered to the **Public Sector**. The report shall describe how **Licensee** intends to fulfill said **Public Sector** requirement for **Licensed Product(s).** A similar report shall be required within six months of marketing approval of the [*] of **Licensed Product(s). Licensee** shall amend the **Commercial Development Plan** and this Benchmarks and Performance Appendix as appropriate.

b) The price at which each **Licensed Product** is sold to the **Public Sector** shall be i) preferential to the lowest **Private Sector** price, and ii) set at the lowest possible level permitting a commercially reasonable return on worldwide sales of each said **Licensed Product.**

c) A **Licensed Product** shall be sold to the **Public Sector** within two years of marketing approval of said **Licensed Product** in the U.S. or Europe, and thereafter **Licensee** agrees to use commercially reasonable efforts to meet any delivery date and in the quantities required in any order placed for **Licensed Product(s)** placed by the **Public Sector.**

[*] designates portions of this document that have been omitted pursuant to a request for confidential treatment filed seperately with the Commission

APPENDIX F—Commercial Development Plan

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APPENDIX G—Developing Countries

The list of developing countries as the following:

1 Afghanistan
2 Albania
3 Angola
4 Armenia
5 Azerbaijan
6 Bahamas
7 Belize
8 Bangladesh
9 Barbados
10 Benin
11 Bhutan
12 Bolivia
13 Bosnia & Herzegov
14 Botswana
15 Burkina Faso
16 Burundi
17 Cambodia
18 Cameroon
19 Central Afr Rep
20 Chad
21 China
22 Comoros
23 Congo, Dem Rep
24 Congo, Rep
25 Côte d'Ivoire
26 Cuba
27 Dominican Republic
28 Djibouti
29 Eritrea
30 Ethiopia
31 Gambia
32 Georgia
33 Ghana
34 Guinea
35 Guinea-Bissau
36 Guatemala
37 Guyana
38 Haiti
39 Honduras
40 India
41 Indonesia
42 Kenya
43 Korea, DPR
44 Kyrgyz Republic
45 Lao PDR
46 Lesotho
47 Liberia
48 Madagascar
49 Malawi

50 Mali
51 Mauritania
52 Moldova
53 Mongolia
54 Mozambique
55 Myanmar
56 Namibia
57 Nepal
58 Nicaragua
59 Niger
60 Nigeria
61 Pakistan
62 Panama
63 Papua New Guinea
64 Rwanda
65 São Thomé
66 Senegal

67 Sierra Leone
68 Solomon Islands
69 Somalia
70 South Africa
71 Sri Lanka
72 Sudan
73 Suriname
74 Swaziland
75 Thailand
76 Tajikistan
77 Tanzania
78 Togo
79 Trinidad
80 Tobago
81 Turkmenistan
82 Ukraine
83 Uganda
84 Uzbekistan
85 Vietnam
86 Yemen
87 Zambia
88 Zimbabwe