

AMENDMENT NO. 2 TO SECURITIES PURCHASE AGREEMENT

This AMENDMENT NO. 2 TO SECURITIES PURCHASE AGREEMENT is entered into as of December 29, 2015 (this "Amendment"), among CIPHER PHARMACEUTICALS INC., an Ontario corporation (the "Issuer"), the Guarantors party hereto, ATHYRIUM OPPORTUNITIES II ACQUISITION LP, as a Purchaser, the other Purchasers party hereto (collectively, the "Purchasers") and ATHYRIUM OPPORTUNITIES II ACQUISITION LP, as Collateral Agent.

WHEREAS, the Issuer, the Guarantors, Purchasers and the Collateral Agent are party to that certain Securities Purchase Agreement, dated as of April 13, 2015, as amended by Amendment No. 1 dated as of September 30, 2015 (as may be further amended from time to time, the "Securities Purchase Agreement"), pursuant to which the Issuer issued Notes to the Purchasers on the terms set forth therein;

WHEREAS, the Issuer has requested that the Purchasers amend the Securities Purchase Agreement, as more fully described herein; and

WHEREAS, the Purchasers are willing to agree to such amendment, but only upon the terms and subject to the conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Defined Terms; References. Capitalized terms used herein without definition shall have the meanings assigned to such terms in the Securities Purchase Agreement. This Amendment shall constitute a Note Document for all purposes of the Securities Purchase Agreement and the other Note Documents. Each reference to "hereof", "hereunder", "herein" and "hereby" and each other similar reference and each reference to "this Amendment" and each other similar reference contained in the Securities Purchase Agreement shall, after this Amendment becomes effective, refer to the Securities Purchase Agreement as amended hereby.

2. Amendment.

(a) Section 8.16(a) (Note Party Net Revenue). The table in Section 8.16(a) of the Securities Purchase Agreement is amended by deleting "\$9,000,000," in the Note Party Net Revenue column for the fiscal quarter ended December 31, 2015, and replacing such amount with "\$8,500,000".

3. Conditions to Effectiveness of Amendment. This Amendment shall become effective upon receipt by (i) the Purchasers of a counterpart signature to this Amendment duly executed and delivered by the Issuer and each of the other Note Parties and (ii) the Note Parties of a counterpart signature to this Amendment duly executed and delivered by the Purchasers.

4. Expenses. The Issuer agrees to pay on demand all reasonable expenses of the Purchasers (including, without limitation, the reasonable fees and out-of-pocket expenses of Covington & Burling LLP, counsel to the Purchasers, and of local counsel, if any, who may be retained by or on behalf of the Purchasers) incurred in connection with the negotiation, preparation, execution and delivery of this Amendment and all other expenses of the Purchasers remaining unpaid as of the date hereof.

5. Representations and Warranties. The Note Parties represent and warrant to the Purchasers as follows:

(a) After giving effect to this Amendment, the representations and warranties of the Issuer and the Guarantors contained in the Securities Purchase Agreement or any other Note Document shall be true and correct in all material respects on and as of the date hereof, except that (x) any such representation and warranty that is qualified by materiality or a reference to Material Adverse Effect shall be true and correct in all respects on and as of the date hereof and (y) to the extent that such representations and warranties specifically refer to an earlier date, in which case they shall be true and correct in all material respects as of such earlier date (except that any such representation and warranty that is qualified by materiality or by reference to Material Adverse Effect shall be true and correct in all respects as of such earlier date).

(b) After giving effect to this Amendment, no Default or Event of Default has occurred or is continuing.

(c) (i) Each Note Party has taken all necessary action to authorize the execution, delivery and performance of this Amendment; (ii) this Amendment has been duly executed and delivered by the Note Parties and constitutes each of the Note Parties' legal, valid and binding obligations, enforceable in accordance with its terms (except, in any case, as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally and by principles of equity), and (iii) no authorization or other action by, and no notice to or filing with, any Governmental Authority or other Person is required for the due execution, delivery or performance by any Note Party of this Amendment.

6. No Implied Amendment or Waiver. Except as expressly set forth in this Amendment, this Amendment shall not, by implication or otherwise, limit, impair, constitute a waiver of or otherwise affect any rights or remedies of the Purchasers under the Securities Purchase Agreement or the other Note Documents, or alter, modify, amend or in any way affect any of the terms, obligations or covenants contained in the Securities Purchase Agreement or the other Note Documents, all of which shall continue in full force and effect. Nothing in this Amendment shall be construed to imply any willingness on the part of the Purchasers to agree to or grant any similar or future amendment, consent or waiver of any of the terms and conditions of the Securities Purchase Agreement or the other Note Documents.

7. Reaffirmation of Security Interests. The Note Parties (i) affirm that each of the security interests and liens granted in or pursuant to the Note Documents are valid and subsisting and (ii) agree that this Amendment shall in no manner impair or otherwise adversely affect any of the security interests and liens granted in or pursuant to the Note Documents.

8. Reaffirmation of Guarantee. Each Guarantor (a) acknowledges and consents to all of the terms and conditions of this Amendment, (b) affirms all of its obligations under the Note Documents and (c) agrees that this Amendment and all documents executed in connection herewith do not operate to reduce or discharge the Guarantor's obligations under the Note Documents.

9. Waiver and Release. TO INDUCE THE PURCHASERS TO AGREE TO THE TERMS OF THIS AMENDMENT, EACH NOTE PARTY REPRESENTS AND WARRANTS THAT AS OF THE DATE HEREOF THERE ARE NO CLAIMS OR OFFSETS AGAINST OR RIGHTS OF RECOUPMENT WITH RESPECT TO OR DEFENSES OR COUNTERCLAIMS TO ITS OBLIGATIONS UNDER THE NOTE DOCUMENTS AND IN ACCORDANCE THEREWITH IT:

(a) WAIVES ANY AND ALL SUCH CLAIMS, OFFSETS, RIGHTS OF RECOUPMENT, DEFENSES OR COUNTERCLAIMS, WHETHER KNOWN OR UNKNOWN, ARISING PRIOR TO THE DATE HEREOF; AND

(b) RELEASES AND DISCHARGES THE PURCHASERS, THEIR AFFILIATES AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, SHAREHOLDERS AND ATTORNEYS (COLLECTIVELY THE “RELEASED PARTIES”) FROM ANY AND ALL OBLIGATIONS, INDEBTEDNESS, LIABILITIES, CLAIMS, RIGHTS, CAUSES OF ACTION OR DEMANDS WHATSOEVER, WHETHER KNOWN OR UNKNOWN, SUSPECTED OR UNSUSPECTED, IN LAW OR EQUITY, WHICH THE ISSUER EVER HAD, NOW HAS, CLAIMS TO HAVE OR MAY HAVE AGAINST ANY RELEASED PARTY ARISING PRIOR TO THE DATE HEREOF AND FROM OR IN CONNECTION WITH THE NOTE DOCUMENTS OR THE TRANSACTIONS CONTEMPLATED THEREBY.

10. Counterparts; Governing Law. This Amendment may be executed in any number of counterparts and by different parties hereto on separate counterparts, each of such when so executed and delivered shall be an original, but all of such counterparts shall together constitute but one and the same agreement. Delivery of an executed counterpart of a signature page of this Amendment by fax transmission or other electronic mail transmission (e.g., “pdf” or “tif”) shall be effective as delivery of a manually executed counterpart of this Amendment. THIS AMENDMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE INTERNAL LAWS OF THE STATE OF NEW YORK (INCLUDING FOR SUCH PURPOSE SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK).

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by their respective officers thereunto duly authorized as of the day and year first above written.

ISSUER: CIPHER PHARMACEUTICALS INC.,
an Ontario corporation

By: (signed) "Norman Evans"
Name: Norman Evans
Title: Chief Financial Officer

GUARANTOR: CIPHER US HOLDINGS INC.,
a Delaware corporation

By: (signed) "Norman Evans"
Name: Norman Evans
Title: Secretary

CIPHER US HOLDCO LLC,
a Delaware limited liability company

By: (signed) "Norman Evans"
Name: Norman Evans
Title: Secretary

3284650 NOVA SCOTIA COMPANY,
a Nova Scotia unlimited liability company

By: (signed) "Norman Evans"
Name: Norman Evans
Title: Secretary

CIPHER ACQUISITION US LLC,
a Delaware limited liability company

By: (signed) "Norman Evans"
Name: Norman Evans
Title: Secretary

CIPHER PHARMACEUTICALS US LLC,
a Delaware limited liability company

By: (signed) "Norman Evans"
Name: Norman Evans
Title: Secretary

PURCHASERS:

ATHYRIUM OPPORTUNITIES II ACQUISITION LP,
a Delaware limited partnership

By: Athyrium Opportunities Associates II LP, its general partner

By: Athyrium Opportunities Associates II GP LLC, its general
partner

By: (signed) "REDACTED"

Name: REDACTED

Title: Authorized Signatory