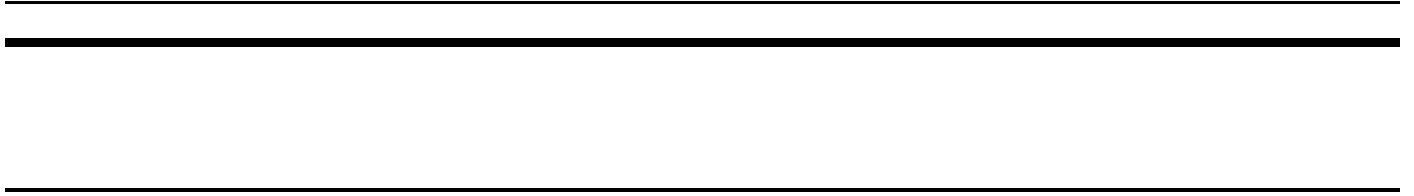


Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))



Item 1.01

Entry into a Material Definitive Agreement

On October 7, 2009, we entered into an amendment to our securities purchase agreement, dated June 17, 2007, with Invus, L.P., under which Invus made an initial investment of \$205.4 million to purchase 50,824,986 shares of our common stock in August 2007 and has the right to require us to initiate up to two pro rata rights offerings to our stockholders, which would provide all stockholders with non-transferable rights to acquire shares of our common stock, in an aggregate amount of up to \$344.5 million, less the proceeds of any “qualified offerings” that we may complete in the interim involving the sale of our common stock at prices above \$4.50 per share.

The amendment, which was entered into in connection with a proposed public offering of our common stock and will become effective upon (and subject to) the completion of such offering and Invus’ grant of consent with respect thereto, includes the following modifications to the original terms of the securities purchase agreement:

- Prior to giving effect to the amendment, Invus could exercise its right to require us to conduct the first rights offering by giving us notice within a period of 90 days beginning on November 28, 2009 (which we refer to as the first rights offering trigger date), although we and Invus could agree to change the first rights offering trigger date with the approval of the members of our board of directors who are not affiliated with Invus. In the amendment, we have agreed to extend by nine months the period during which Invus may exercise its right to require us to conduct the first rights offering, resulting in Invus having such right for a period of one year beginning on the first rights offering trigger date.
- Prior to giving effect to the amendment, Invus could exercise its right to require us to conduct a second rights offering by giving us notice within a period of 90 days beginning on the date that is 12 months after Invus’ exercise of its right to require us to conduct the first rights offering or, if Invus does not exercise its right to require us to conduct the first rights offering, within a period of 90 days beginning on the first anniversary of the first rights offering trigger date. In the amendment, we have agreed to modify the timing of this right to permit Invus to exercise its right to require us to conduct the second rights offering by giving us notice within a period of one year beginning on the date (which we refer to as the first rights offering trigger date) that is 90 days after Invus’ exercise of its right to require us to conduct the first rights offering or, if Invus does not exercise its right to require us to conduct the first rights offering, within a period of one year beginning on the first anniversary of the first rights offering trigger date.
- Prior to giving effect to the amendment, if Invus elected to exercise its rights to require us to initiate a rights offering, Invus was required to purchase its pro rata portion of the offering, and to commit to purchase the entire portion of the offering not subscribed for by other stockholders. In the amendment, we have agreed to modify these obligations such that, if Invus elects to exercise its rights to require us to initiate a rights offering, Invus will be required to purchase only its pro rata portion of the rights offering, and will not be obligated to purchase the entire portion of the offering not subscribed for by other stockholders.
- Upon effectiveness of the amendment, the amended securities purchase agreement provides that, if we notify Invus of a proposed public offering for an offering above \$4.50 per share during the period in which Invus may initiate a rights offering, Invus will have a period of 10 business days in which to exercise its right to require us to conduct a rights offering, in which case we would be required to forego the proposed public offering and proceed with the rights offering. In the event that Invus does not exercise its right to require us to conduct a rights offering within such period, we will have the right to conduct the proposed public offering, and Invus will not initiate a rights offering (a) for an initial period of 30 days and (b) so long as the offering occurs within that 30-day period, and if requested by the underwriters for the public offering, for an additional period of 90 days, provided that we may exercise this “blackout right” only once in any 12-month period. In such event, the one-year period in which Invus may initiate a rights offering (and, if the blackout period occurs during the period in which Invus may initiate the first rights offering, the second rights offering trigger date) will be tolled by a number of days equal to the aggregate

number of days the blackout period is in effect.

- The amended securities purchase agreement will permit us, at our option, to file and use a shelf registration statement for purposes of any rights offerings rather than filing a new registration statement after receiving a rights offering notice.
- The amended securities purchase agreement will change the timing of the pricing of a rights offering from the time of delivery of notice by Invus of its exercise of its right to require us to conduct such rights offering to the time the record date for the distribution of the rights to our stockholders is established by our board of directors.

Item 9.01

Financial Statements and Exhibits

(d) Exhibits

| Exhibit No. | Description |
|-------------|--|
| 10.1 | —Amendment, dated October 7, 2009, to Securities Purchase Agreement, dated June 17, 2007, with Invus, L.P. |

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Lexicon Pharmaceuticals, Inc.

Date: October 7, 2009

By: /s/ Jeffrey L. Wade
Jeffrey L. Wade
Executive Vice President and
General Counsel