

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934

Axsome Therapeutics, Inc.

(Name of Issuer)

Common Stock, \$0.0001 par value per share

(Title of Class of Securities)

05464T104

(CUSIP Number)

**Herriot Tabuteau, M.D.
Antecip Capital LLC
630 5th Avenue, Suite 2000
New York, New York 10111
646-688-2824**

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

November 24, 2015

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1. Names of Reporting Persons
Antecip Capital LLC

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See Instructions)
WC

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization
Delaware

7. Sole Voting Power
0

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power
7,344,500

9. Sole Dispositive Power
0

10. Shared Dispositive Power
7,344,500

11. Aggregate Amount Beneficially Owned by Each Reporting Person
7,344,500

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)
38.4%

14. Type of Reporting Person (See Instructions)
OO (Other)

1. Names of Reporting Persons
Herriot Tabuteau, M.D.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See Instructions)
PF

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization
United States

7. Sole Voting Power
7,229

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power
7,344,500

9. Sole Dispositive Power
7,229

10. Shared Dispositive Power
7,344,500

11. Aggregate Amount Beneficially Owned by Each Reporting Person
7,351,729

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)
38.4%

14. Type of Reporting Person (See Instructions)
PN

Item 1. Security and Issuer

This Schedule 13D relates to the common stock, par value \$0.0001 per share, (the “Common Stock”) of Axsome Therapeutics, Inc., a Delaware corporation (the “Issuer”). The principal executive offices of the Issuer are located at 25 Broadway, 9th Floor, New York, New York 10004.

Item 2. Identity and Background

(a) This statement is being filed jointly on behalf of the following persons (the “Filing Persons”): Antecip Capital LLC, a Delaware limited liability company (“Antecip”) and Herriot Tabuteau, M.D. (“Dr. Tabuteau”). Dr. Tabuteau is the managing member of Antecip, and in his capacity as such, may be deemed to exercise shared voting and investment power over the shares held by Antecip. The Filing Persons specifically disclaim beneficial ownership in the securities reported herein except to the extent of any pecuniary interest therein.

(b) The address of the principal business and office of each of the Filing Persons is 630 5th Avenue, Suite 2000, New York, New York 10111.

(c) The principal business of Antecip is to invest in securities. The principal business of Dr. Tabuteau is to serve as the Chief Executive Officer and Chairman of the Board of the Issuer.

(d) During the five years prior to the date hereof, neither of the Filing Persons has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the last five years prior to the date hereof, neither of the Filing Persons was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of which such person was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration

In connection with the formation of the Issuer, in January 2012, the Issuer issued to Antecip an aggregate of 7,344,500 shares of Common Stock for nominal consideration.

On November 19, 2015, the Registration Statement on Form S-1 filed with the Securities and Exchange Commission by the Issuer (File No. 333-207393) in connection with its initial public offering of 5,666,667 shares of Common Stock of the Issuer (the “IPO”) was declared effective. The closing of the IPO took place on November 24, 2015.

Immediately prior to the closing of the IPO, an 8% convertible note with a principal balance of \$41,469.47 and interest accrued through November 24, 2015 of \$1,472 held by Dr. Tabuteau automatically converted into 7,229 shares of Common Stock.

The working capital of Antecip and the personal funds of Dr. Tabuteau were the source of the funds for the purchase of the securities described above. No part of the purchase price of the securities described above was represented by funds or other consideration borrowed or otherwise obtained for the purpose of acquiring, holding, trading or voting the securities described above.

Item 4. Purpose of Transaction

The Filing Persons acquired the securities described above for investment purposes. Depending on market conditions other factors, the Filing Persons may dispose of such shares of the Issuer. The Filing Persons expect to consider and evaluate on an ongoing basis all their options with respect to dispositions of their investment in the Issuer.

None of the Filing Persons, has any plans that would result in:

(a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;

(b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of

its subsidiaries;

- (c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;
- (f) Any other material change in the Issuer's business or corporate structure including but not limited to, if the Issuer is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by section 13 of the Investment Company Act of 1940;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or
- (j) Any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer

- (a) As more fully described in Item 3 above, (i) Antecip is the beneficial owner of 7,344,500 shares of the Issuer's Common Stock, representing 38.4% of the Issuer's shares of Common Stock outstanding and (ii) Dr. Tabuteau is the beneficial owner of 7,351,729 shares of the Issuer's Common Stock, consisting of 7,229 shares of Common Stock held directly by Dr. Tabuteau and 7,344,500 shares of Common Stock held by Antecip. The percentage calculations are based upon 19,137,144 shares of Common Stock outstanding as of November 24, 2015 based on information provided by the Issuer.
- (b) By virtue of his status as managing member of Antecip, Dr. Tabuteau may be deemed to share voting and dispositive power with respect to the 7,344,500 shares of the Issuer's Common Stock beneficially owned by Antecip. Dr. Tabuteau holds sole voting and dispositive power with respect to the 7,229 shares of the Issuer's Common Stock beneficially owned by him.
- (c) During the past sixty days prior to the date hereof, the following transactions occurred:

Other than as described in Items 3 and 4 above, during the past sixty days prior to the date hereof, the Filing Persons have not engaged in any transaction in the Issuer's Common Stock.
- (d) No person, other than Dr. Tabuteau, is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, the shares of Common Stock beneficially owned by Antecip.
- (e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Lock-Up Agreement

Antecip, Dr. Tabuteau, certain other stockholders and each director and officer of the Issuer agreed with Ladenburg Thalmann & Co. Inc., as representative of the several underwriters (the "Underwriters"), pursuant to a lock-up agreement (each, a "Lock-Up Agreement"), for the period beginning on the date of such Lock-Up Agreement and continuing through the close of trading on the date that is 180 days after November 24, 2015, subject to certain exceptions, not to offer, sell, assign or transfer any Common Stock of the Issuer without the prior written consent of the Underwriters, as set forth in greater detail in the form of Lock-Up Agreement attached as an exhibit to Exhibit 1.1. filed with the Issuer's Amendment

No. 1 to Form S-1 filed on November 2, 2015.

License Agreements

In 2012, the Issuer entered into three exclusive license agreements (the “License Agreements”) with Antecip Bioventures II LLC (“Antecip Bio”), an entity owned by Dr. Tabuteau, in which the Issuer was granted exclusive licenses to develop, manufacture, and commercialize Antecip Bio’s patents and applications related to the development of AXS-02 and AXS-05, as well as AXS-04, a product candidate that is currently in early stage development, anywhere in the world for veterinary and human therapeutic and diagnostic use. The agreements were amended in August 2015 to update the schedule of patents and applications subject to the License Agreements. Pursuant to the agreements, the Issuer is required to use commercially reasonable efforts to develop, obtain regulatory approval for, and commercialize AXS-02, AXS-05, and AXS-04. Under the terms of the agreements, the Issuer is required to pay certain royalties to Antecip Bio.

The foregoing descriptions of the terms of the Lock-up Agreement and the License Agreements are intended as a summary only and are qualified in their entirety by reference to the Form of Lock-up Agreement and the License Agreements, which are filed as exhibits to this Schedule 13D and incorporated by reference herein.

Other than as described in this Schedule 13D, to the knowledge of the Filing Persons, there are no contracts, arrangements, understanding or relationships (legal or otherwise) among the persons named in Item 2 and between such persons and any person with respect to any securities of the Issuer.

Item 7. Material to be Filed as Exhibits

Exhibit 1

Joint Filing Agreement as required by Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended.

Exhibit 2

Form of Lock-up Agreement, filed as an exhibit to Exhibit 1.1 to the Issuer’s Registration Statement on Form S-1 (SEC File No. 333-207393), filed with the SEC on November 2, 2015.

Exhibit 3

License Agreement, dated January 12, 2012, by and between the Issuer and Antecip Bioventures II LLC, as modified by the First Amendment to License Agreement, dated August 21, 2015, by and between the Issuer and Antecip Bioventures II LLC, filed as Exhibit 10.2 to the Issuer’s Registration Statement on Form S-1 (SEC File No. 333-207393), filed with the SEC on October 13, 2015.

Exhibit 4

License Agreement, dated April 17, 2012, by and between the Issuer and Antecip Bioventures II LLC, as modified by the First Amendment to License Agreement, dated August 21, 2015, by and between the Issuer and Antecip Bioventures II LLC, filed as Exhibit 10.3 to the Issuer’s Registration Statement on Form S-1 (SEC File No. 333-207393), filed with the SEC on October 13, 2015.

Exhibit 5

License Agreement, dated June 6, 2012, by and between the Issuer and Antecip Bioventures II LLC, as modified by the First Amendment to License Agreement, dated August 21, 2015, by and between the Issuer and Antecip Bioventures II LLC, filed as Exhibit 10.4 to the Issuer’s Registration Statement on Form S-1 (SEC File No. 333-207393), filed with the SEC on October 13, 2015.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: December 4, 2015

Antecip Capital LLC

By: /s/ Herriot Tabuteau, M.D.

Name: Herriot Tabuteau, M.D.

Title: Managing Member

Dated: December 4, 2015

/s/ Herriot Tabuteau, M.D.

Herriot Tabuteau, M.D.

ATTENTION

Intentional misstatements or omissions of fact constitute Federal Criminal Violations (See 18 U.S.C. 1001).

JOINT FILING AGREEMENT

Pursuant to and in accordance with the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations thereunder, each party hereto hereby agrees to the joint filing, on behalf of each of them, of any filing required by such party under Section 13 of the Exchange Act or any rule or regulation thereunder (including any amendment, restatement, supplement, and/or exhibit thereto) with the Securities and Exchange Commission (and, if such security is registered on a national securities exchange, also with the exchange), and further agrees to the filing, furnishing, and/or incorporation by reference of this agreement as an exhibit thereto. This agreement shall remain in full force and effect until revoked by any party hereto in a signed writing provided to each other party hereto, and then only with respect to such revoking party.

IN WITNESS WHEREOF, each party hereto, being duly authorized, has caused this agreement to be executed and effective as of the date set forth below.

Dated: December 4, 2015

Antecip Capital LLC

By: /s/ Herriot Tabuteau, M.D.

Name: Herriot Tabuteau, M.D.

Title: Managing Member

Dated: December 4, 2015

/s/ Herriot Tabuteau, M.D.

Herriot Tabuteau, M.D.
