

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934  
(Amendment No. )\*

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Cabaletta Bio, Inc.  
(Name of Issuer)

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Voting Common Stock, \$0.00001 par value per share  
(Title of Class of Securities)

12674W109  
(CUSIP Number)

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April 30, 2020  
(Date of Event Which Requires Filing of This Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- ☐ Rule 13d-1(b)  
☒ Rule 13d-1(c)  
☐ Rule 13d-1(d)

(Page 1 of 12 Pages)

\*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 the disclosures provided in a prior cover page.

The information required in 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).

|  |   |   |
|--|---|---|
| <b>1</b>   | NAME OF REPORTING PERSON<br>Adage Capital Partners, L.P.  |   |
| <b>2</b>   | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/><br>(b) <input type="checkbox"/>   |   |
| <b>3</b>   | SEC USE ONLY  |   |
| <b>4</b>   | CITIZENSHIP OR PLACE OF ORGANIZATION<br>Delaware  |   |
| NUMBER OF<br>SHARES<br>BENEFICIALLY<br>OWNED BY<br>EACH<br>REPORTING<br>PERSON WITH: | <b>5</b>  | SOLE VOTING POWER<br>0  |
|  | <b>6</b>  | SHARED VOTING POWER<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of shares of Non-Voting Common Stock)      |
|  | <b>7</b>  | SOLE DISPOSITIVE POWER<br>0   |
|  | <b>8</b>  | SHARED DISPOSITIVE POWER<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of shares of Non-Voting Common Stock) |
| <b>9</b>   | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of shares of Non-Voting Common Stock) |   |
| <b>10</b>  | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>   |   |
| <b>11</b>  | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)<br>9.99%  |   |
| <b>12</b>  | TYPE OF REPORTING PERSON<br>PN  |   |

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|--|---|---|
| <b>1</b>   | NAME OF REPORTING PERSON<br>Adage Capital Partners GP, L.L.C.   |   |
| <b>2</b>   | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/><br>(b) <input type="checkbox"/>   |   |
| <b>3</b>   | SEC USE ONLY  |   |
| <b>4</b>   | CITIZENSHIP OR PLACE OF ORGANIZATION<br>Delaware  |   |
| NUMBER OF<br>SHARES<br>BENEFICIALLY<br>OWNED BY<br>EACH<br>REPORTING<br>PERSON WITH: | <b>5</b>  | SOLE VOTING POWER<br>0  |
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| <b>12</b>  | TYPE OF REPORTING PERSON<br>OO  |   |

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|  |   |   |
|--|---|---|
| <b>1</b>   | NAME OF REPORTING PERSON<br>Adage Capital Advisors, L.L.C.  |   |
| <b>2</b>   | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/><br>(b) <input type="checkbox"/>   |   |
| <b>3</b>   | SEC USE ONLY  |   |
| <b>4</b>   | CITIZENSHIP OR PLACE OF ORGANIZATION<br>Delaware  |   |
| NUMBER OF<br>SHARES<br>BENEFICIALLY<br>OWNED BY<br>EACH<br>REPORTING<br>PERSON WITH: | <b>5</b>  | SOLE VOTING POWER<br>0  |
|  | <b>6</b>  | SHARED VOTING POWER<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of shares of Non-Voting Common Stock)      |
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|  |   |   |
|--|---|---|
| <b>1</b>   | NAME OF REPORTING PERSON<br>Robert Atchinson  |   |
| <b>2</b>   | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/><br>(b) <input type="checkbox"/>   |   |
| <b>3</b>   | SEC USE ONLY  |   |
| <b>4</b>   | CITIZENSHIP OR PLACE OF ORGANIZATION<br>United States   |   |
| NUMBER OF<br>SHARES<br>BENEFICIALLY<br>OWNED BY<br>EACH<br>REPORTING<br>PERSON WITH: | <b>5</b>  | SOLE VOTING POWER<br>0  |
|  | <b>6</b>  | SHARED VOTING POWER<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares)      |
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| <b>11</b>  | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)<br>9.99%  |   |
| <b>12</b>  | TYPE OF REPORTING PERSON<br>IN  |   |

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|  |   |   |
|--|---|---|
| <b>1</b>   | NAME OF REPORTING PERSON<br>Phillip Gross   |   |
| <b>2</b>   | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/><br>(b) <input type="checkbox"/>   |   |
| <b>3</b>   | SEC USE ONLY  |   |
| <b>4</b>   | CITIZENSHIP OR PLACE OF ORGANIZATION<br>United States   |   |
| NUMBER OF<br>SHARES<br>BENEFICIALLY<br>OWNED BY<br>EACH<br>REPORTING<br>PERSON WITH: | <b>5</b>  | SOLE VOTING POWER<br>0  |
|  | <b>6</b>  | SHARED VOTING POWER<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares)      |
|  | <b>7</b>  | SOLE DISPOSITIVE POWER<br>0   |
|  | <b>8</b>  | SHARED DISPOSITIVE POWER<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares) |
| <b>9</b>   | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON<br>1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares) |   |
| <b>10</b>  | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>   |   |
| <b>11</b>  | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)<br>9.99%  |   |
| <b>12</b>  | TYPE OF REPORTING PERSON<br>IN  |   |

\*The information set forth on this cover page reflects information as of the date of this filing. As of April 30, 2020, the Reporting Persons may have been deemed to beneficially own 1,911,707 shares of Voting Common Stock (including 1,511,707 shares of Voting Common Stock issuable upon conversion of shares of Non-Voting Common Stock), representing 9.99% of the outstanding shares of Voting Common Stock as of such time assuming the conversion of such shares of Non-Voting Common Stock.

**Item 1(a). NAME OF ISSUER**

The name of the issuer is Cabaletta Bio, Inc. (the "Company").

**Item 1(b). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES**

The Company's principal executive offices are located at 2929 Arch Street, Suite 600, Philadelphia, PA 19104.

**Item 2(a). NAME OF PERSON FILING**

This statement is filed by:

- (i) Adage Capital Partners, L.P., a Delaware limited partnership ("ACP") with respect to the shares of Voting Common Stock directly owned by it;
- (ii) Adage Capital Partners GP, L.L.C., a limited liability company organized under the laws of the State of Delaware ("ACPGP"), as general partner of ACP with respect to the shares of Voting Common Stock directly owned by ACP;
- (iii) Adage Capital Advisors, L.L.C., a limited liability company organized under the laws of the State of Delaware ("ACA"), as managing member of ACPGP, general partner of ACP, with respect to the shares of Voting Common Stock directly owned by ACP;
- (iv) Robert Atchinson ("Mr. Atchinson"), as managing member of ACA, managing member of ACPGP, general partner of ACP with respect to the shares of Voting Common Stock directly owned by ACP; and
- (v) Phillip Gross ("Mr. Gross"), as managing member of ACA, managing member of ACPGP, general partner of ACP with respect to the shares of Voting Common Stock directly owned by ACP.

The foregoing persons are hereinafter sometimes collectively referred to as the "Reporting Persons." Any disclosures herein with respect to persons other than the Reporting Persons are made on information and belief after making inquiry to the appropriate party.

The filing of this statement should not be construed in and of itself as an admission by any Reporting Person as to beneficial ownership of the securities reported herein.

**Item 2(b). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE**

The address of the business office of each of the Reporting Persons is 200 Clarendon Street, 52nd Floor, Boston, Massachusetts 02116.

**Item 2(c). CITIZENSHIP**

ACP is a limited partnership organized under the laws of the State of Delaware. ACPGP and ACA are limited liability companies organized under the laws of the State of Delaware. Messrs. Gross and Atchinson are citizens of the United States.

**Item 2(d). TITLE OF CLASS OF SECURITIES**  
Voting Common Stock, \$0.00001 par value per share (the "Voting Common Stock").

**Item 2(e). CUSIP NUMBER**  
12674W109

**Item 3. IF THIS STATEMENT IS FILED PURSUANT TO Rules 13d-1(b), OR 13d-2(b) OR (c), CHECK WHETHER THE PERSON FILING IS A:**

- (a) ☐ Broker or dealer registered under Section 15 of the Act;
- (b) ☐ Bank as defined in Section 3(a)(6) of the Act;
- (c) ☐ Insurance company as defined in Section 3(a)(19) of the Act;
- (d) ☐ Investment company registered under Section 8 of the Investment Company Act of 1940;
- (e) ☐ An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
- (f) ☐ An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);
- (g) ☐ A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);
- (h) ☐ A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act;
- (i) ☐ A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act;
- (j) ☐ A non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J);
- (k) ☐ Group, in accordance with Rule 13d-1(b)(1)(ii)(K).

If filing as a non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J), please specify the type of institution: Not applicable.



**Item 4. OWNERSHIP**

- A. Adage Capital Partners, L.P., Adage Capital Partners GP, L.L.C. and Adage Capital Advisors, L.L.C.
- (a) Amount beneficially owned: 1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares).
  - (b) Percent of class: 9.99%. The percentage set forth in this Schedule 13G is calculated based upon a total of 17,624,503 shares of Voting Common Stock outstanding as of May 8, 2020, as reported in the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020, filed with the Securities and Exchange Commission on May 12, 2020 and assumes the conversion of such shares of Non-Voting Common Stock.
  - (c)
    - (i) Sole power to vote or direct the vote: 0
    - (ii) Shared power to vote or direct the vote: 1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares)
    - (iii) Sole power to dispose or direct the disposition: 0
    - (iv) Shared power to dispose or direct the disposition of: 1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares)

ACP has the power to dispose of and the power to vote the shares of Voting Common Stock beneficially owned by it, which power may be exercised by its general partner, ACPGP. ACA, as managing member of ACPGP, directs ACPGP's operations. Neither ACPGP nor ACA directly own any shares of Voting Common Stock. By reason of the provisions of Rule 13d-3 of the Act, ACPGP and ACA may be deemed to beneficially own the shares owned by ACP.

- B. Robert Atchinson and Phillip Gross
- (a) Amount beneficially owned: 1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares)
  - (b) Percent of class: 9.99%
  - (c)
    - (i) Sole power to vote or direct the vote: 0
    - (ii) Shared power to vote or direct the vote: 1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares)
    - (iii) Sole power to dispose or direct the disposition: 0
    - (iv) Shared power to dispose or direct the disposition: 1,933,904 (including 1,733,904 shares of Voting Common Stock issuable upon conversion of non-voting shares)

Messrs. Atchinson and Gross, as managing members of ACA, have shared power to vote the shares of Voting Common Stock beneficially owned by ACP. Neither Mr. Atchinson nor Mr. Gross directly own any shares of Voting Common Stock. By reason of the provisions of Rule 13d-3 of the Act, each may be deemed to beneficially own the shares beneficially owned by ACP.

On the date of the event which requires the filing of this Schedule 13G, each of the Reporting Persons may have been deemed to be the beneficial owner of 1,911,707 shares of Voting Common Stock (including 1,511,707 shares of Voting Common Stock issuable upon conversion of non-voting shares), representing 9.99% of the outstanding shares of Voting Common Stock as of such time assuming the conversion of such shares of Non-Voting Common Stock.

**Item 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS**

Not applicable.

**Item 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON**

Not applicable.

**Item 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY OR CONTROL PERSON**

Not applicable.

**Item 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP**

Not applicable.

**Item 9. NOTICE OF DISSOLUTION OF GROUP**

Not applicable.

**Item 10. CERTIFICATION**

Each of the Reporting Persons hereby makes the following certification:

By signing below each Reporting Person certifies that, to the best of his or its knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

**SIGNATURES**

After reasonable inquiry and to the best of his or its knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

DATE: July 21, 2020

ADAGE CAPITAL PARTNERS, L.P.  
By: Adage Capital Partners GP, L.L.C.,  
its general partner

By: Adage Capital Advisors, L.L.C.,  
its managing member

/s/ Robert Atchinson

Name: Robert Atchinson  
Title: Managing Member

ADAGE CAPITAL PARTNERS GP, L.L.C.  
By: Adage Capital Advisors, L.L.C.,  
its managing member

/s/ Robert Atchinson

Name: Robert Atchinson  
Title: Managing Member

ADAGE CAPITAL ADVISORS, L.L.C.

/s/ Robert Atchinson

Name: Robert Atchinson  
Title: Managing Member

ROBERT ATCHINSON

/s/ Robert Atchinson

ROBERT ATCHINSON, individually

PHILLIP GROSS

/s/ Phillip Gross

PHILLIP GROSS, individually

**EXHIBIT 1****JOINT FILING AGREEMENT  
PURSUANT TO RULE 13d-1(k)**

The undersigned acknowledge and agree that the foregoing statement on Schedule 13G is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13G shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing agreements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him or it contained herein and therein, but shall not be responsible for the completeness and accuracy of the information concerning the others, except to the extent that he or it knows or has reason to believe that such information is inaccurate.

DATE: July 21, 2020

ADAGE CAPITAL PARTNERS, L.P.  
By: Adage Capital Partners GP, L.L.C.,  
its general partner

By: Adage Capital Advisors, L.L.C.,  
its managing member

/s/ Robert Atchinson

Name: Robert Atchinson  
Title: Managing Member

ADAGE CAPITAL PARTNERS GP, L.L.C.  
By: Adage Capital Advisors, L.L.C.,  
its managing member

/s/ Robert Atchinson

Name: Robert Atchinson  
Title: Managing Member

ADAGE CAPITAL ADVISORS, L.L.C.

/s/ Robert Atchinson

Name: Robert Atchinson  
Title: Managing Member

/s/ Robert Atchinson

ROBERT ATCHINSON, individually

/s/ Phillip Gross

PHILLIP GROSS, individually