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

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**SCHEDULE 13G**

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

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**CORTEXYME, INC.**  
(Name of Issuer)

**Common Stock, par value \$0.001 per share**  
(Title of Class of Securities)

**22053A107**  
(CUSIP Number)

**May 8, 2019**  
(Date of Event Which Requires Filing of this Statement)

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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)

\* 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).

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(1)	Names of reporting persons Takeda Pharmaceutical Company Limited	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(3)	SEC use only	
(4)	Citizenship or place of organization Japan	
Number of shares beneficially owned by each reporting person with:	(5)	Sole voting power 0
	(6)	Shared voting power 2,679,802
	(7)	Sole dispositive power 0
	(8)	Shared dispositive power 2,679,802
(9)	Aggregate amount beneficially owned by each reporting person 2,679,802 (1)	
(10)	Check if the aggregate amount in Row (9) excludes certain shares (see instructions) <input type="checkbox"/>	
(11)	Percent of class represented by amount in Row (9) 9.9%(2)	
(12)	Type of reporting person (see instructions) CO	

- (1) Takeda Pharmaceutical Company Limited's beneficial ownership of the issuer's Common Stock is comprised of 2,679,802 shares of Common Stock held by Takeda Ventures, Inc., a wholly-owned indirect subsidiary of Takeda Pharmaceutical Company Limited. Takeda Ventures, Inc. is owned directly by Takeda Pharmaceuticals U.S.A., Inc., which is owned directly by both Takeda Pharmaceutical Company Limited (58.09%) and Takeda Pharmaceuticals International AG (41.91%). Takeda Pharmaceuticals International AG is a wholly-owned direct subsidiary of Takeda Pharmaceutical Company Limited.
- (2) Based on 26,829,689 shares of Common Stock outstanding after the issuer's initial public offering, as disclosed in the issuer's final prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, dated May 8, 2019 (the "Final Prospectus"), and rounded from 9.988%. The number of shares includes the additional 661,800 shares that the underwriters purchased pursuant to an option, as stated in a Form 8-K filed by the issuer on May 13, 2019 (the "Form 8-K").

(1)	Names of reporting persons Takeda Pharmaceuticals International AG	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(3)	SEC use only	
(4)	Citizenship or place of organization Switzerland	
Number of shares beneficially owned by each reporting person with:	(5)	Sole voting power 0
	(6)	Shared voting power 1,123,105 (1)
	(7)	Sole dispositive power 0
	(8)	Shared dispositive power 1,123,105(1)
(9)	Aggregate amount beneficially owned by each reporting person 1,123,105 (1)	
(10)	Check if the aggregate amount in Row (9) excludes certain shares (see instructions) <input type="checkbox"/>	
(11)	Percent of class represented by amount in Row (9) 4.2%(2)	
(12)	Type of reporting person (see instructions) CO	

(1) Takeda Pharmaceuticals International AG's beneficial ownership of the issuer's Common Stock is comprised of 1,123,105 of the 2,679,802 shares of Common Stock held by Takeda Ventures, Inc., an indirect subsidiary of Takeda Pharmaceuticals International AG. Takeda Pharmaceuticals International AG owns 41.91% of Takeda Pharmaceuticals U.S.A., Inc. and Takeda Ventures, Inc. is a wholly-owned direct subsidiary of Takeda Pharmaceuticals U.S.A., Inc.

(2) Based on 26,829,689 shares of Common Stock outstanding after the issuer's initial public offering, as disclosed in the issuer's Final Prospectus, including the additional 661,800 shares that the underwriters purchased pursuant to an option as stated in the Form 8-K.

(1)	Names of reporting persons Takeda Pharmaceuticals U.S.A., Inc.	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(3)	SEC use only	
(4)	Citizenship or place of organization United States	
Number of shares beneficially owned by each reporting person with:	(5)	Sole voting power 0
	(6)	Shared voting power 2,679,802
	(7)	Sole dispositive power 0
	(8)	Shared dispositive power 2,679,802
(9)	Aggregate amount beneficially owned by each reporting person 2,679,802 (1)	
(10)	Check if the aggregate amount in Row (9) excludes certain shares (see instructions) <input type="checkbox"/>	
(11)	Percent of class represented by amount in Row (9) 9.9%(2)	
(12)	Type of reporting person (see instructions) CO	

(1) Takeda Pharmaceuticals U.S.A., Inc.'s beneficial ownership of the issuer's Common Stock is comprised of 2,679,802 shares of Common Stock held by Takeda Ventures, Inc., a wholly-owned direct subsidiary of Takeda Pharmaceuticals U.S.A., Inc.

(2) Based on 26,829,689 shares of Common Stock outstanding after the issuer's initial public offering, as disclosed in the issuer's Final Prospectus, including the additional 661,800 shares that the underwriters purchased pursuant to an option as stated in the Form 8-K, and rounded from 9.988%.

(1)	Names of reporting persons Takeda Ventures, Inc.	
(2)	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
(3)	SEC use only	
(4)	Citizenship or place of organization United States	
Number of shares beneficially owned by each reporting person with:	(5)	Sole voting power 0
	(6)	Shared voting power 2,679,802
	(7)	Sole dispositive power 0
	(8)	Shared dispositive power 2,679,802
(9)	Aggregate amount beneficially owned by each reporting person 2,679,802	
(10)	Check if the aggregate amount in Row (9) excludes certain shares (see instructions) <input type="checkbox"/>	
(11)	Percent of class represented by amount in Row (9) 9.9%(1)	
(12)	Type of reporting person (see instructions) CO	

- (1) Based on 26,829,689 shares of Common Stock outstanding after the issuer's initial public offering, as disclosed in the issuer's Final Prospectus, including the additional 661,800 shares that the underwriters purchased pursuant to an option as stated in the Form 8-K, and rounded from 9.988%.

**Item 1(a) Name of issuer:**

Cortexyme, Inc.

**Item 1(b) Address of issuer's principal executive offices:**

269 East Grand Ave., South San Francisco, California 94080

**Item 2(a) Name of person filing:**

Takeda Pharmaceutical Company Limited  
Takeda Pharmaceuticals International AG  
Takeda Pharmaceuticals U.S.A., Inc.  
Takeda Ventures, Inc.

**Item 2(b) Address of principal business office or, if none, residence:**

Takeda Pharmaceutical Company Limited – 1-1, Nihonbashi-Honcho 2-Chome, Chuo-ku, Tokyo 103-8668, Japan  
Takeda Pharmaceuticals International AG – Thurgauerstrasse 130, 8152 Glattpark-Opfikon, Zurich, Switzerland  
Takeda Pharmaceuticals U.S.A., Inc. – One Takeda Parkway, Deerfield, IL 60015, USA  
Takeda Ventures, Inc. – 435 Tasso Street, Suite 300, Palo Alto, CA 94301, USA

**Item 2(c) Citizenship:**

Takeda Pharmaceutical Company Limited – Japan  
Takeda Pharmaceuticals International AG – Switzerland  
Takeda Pharmaceuticals U.S.A., Inc. – United States  
Takeda Ventures, Inc. – United States

**Item 2(d) Title of class of securities:**

Common Stock, par value \$0.001 per share

**Item 2(e) CUSIP No.:**

22053A107

**Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:**

Not applicable.

**Item 4. Ownership**

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned: See the responses to Item 9 on the attached cover pages.
- (b) Percent of class: See the responses to Item 11 on the attached cover pages.
- (c) Number of shares as to which the person has:
- (i) Sole power to vote or to direct the vote: See the responses to Item 5 on the attached cover pages.

(ii) Shared power to vote or to direct the vote: See the responses to Item 6 on the attached cover pages.

(iii) Sole power to dispose or to direct the disposition of: See the responses to Item 7 on the attached cover pages.

(iv) Shared power to dispose or to direct the disposition of: See the responses to Item 8 on the attached cover pages.

The percentages used herein and in this Item 4 are calculated based on 26,829,689 shares of Common Stock outstanding after the issuer's initial public offering, as disclosed in the issuer's Final Prospectus, including the additional 661,800 shares that the underwriters purchased pursuant to an option as stated in the Form 8-K.

**Item 5. Ownership of 5 Percent or Less of a Class.**

Not applicable.

**Item 6. Ownership of More than 5 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.**

See Exhibit 99.1.

**Item 8. Identification and Classification of Members of the Group.**

Not applicable.

**Item 9. Notice of Dissolution of Group.**

Not applicable.

**Item 10. Certifications**

By signing below I certify that, to the best of my 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, other than activities solely in connection with a nomination under § 240.14a-11.

## Signatures

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: May 20, 2019

TAKEDA PHARMACEUTICAL COMPANY LIMITED

By /s/ Yoshihiro Nakagawa

Name: Yoshihiro Nakagawa

Title: Corporate Officer, Global General Counsel

TAKEDA PHARMACEUTICALS INTERNATIONAL AG

By /s/ Andrea Ferrari

Name: Andrea Ferrari

Title: Director and Secretary  
VP, Regional General Counsel Europe and  
Canada

TAKEDA PHARMACEUTICALS U.S.A., INC.

By /s/ Paul Sundberg

Name: Paul Sundberg

Title: Assistant Secretary

TAKEDA VENTURES, INC.

By /s/ Michael Martin

Name: Michael Martin

Title: President



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**INDEX TO EXHIBITS**

- Exhibit 99.1 Identification of the subsidiary which acquired the security being reported on by the parent holding company
- Exhibit 99.2 Joint Filing Agreement

**Identification of the subsidiary which acquired the security being reported on by the parent holding company.**

The reported securities are beneficially owned by Takeda Ventures, Inc., a direct wholly-owned subsidiary of Takeda Pharmaceuticals U.S.A., Inc., which, in turn, is a direct subsidiary of Takeda Pharmaceuticals International AG (41.91%) and Takeda Pharmaceutical Company Limited (58.09%). Takeda Pharmaceuticals International AG is a direct wholly-owned subsidiary of Takeda Pharmaceutical Company Limited.

**JOINT FILING AGREEMENT**

The undersigned hereby agree that the Statement on Schedule 13G filed herewith (and any amendments thereto), relating to the Common Stock of Cortexyme, Inc., a Delaware corporation, is being filed jointly with the Securities and Exchange Commission pursuant to Rule 13d-1(d) under the Securities Exchange Act of 1934, as amended, on behalf of each of the undersigned. In addition, each party to this Agreement expressly authorizes each other party to this Agreement to file on its behalf any and all amendments to such Statement on Schedule 13G.

This Agreement may be executed in counterparts and each of such counterparts taken together shall constitute one and the same instrument.

Date: May 20, 2019

TAKEDA PHARMACEUTICAL COMPANY LIMITED

By /s/ Yoshihiro Nakagawa \_\_\_\_\_

Name: Yoshihiro Nakagawa

Title: Corporate Officer, Global General Counsel

TAKEDA PHARMACEUTICALS INTERNATIONAL AG

By /s/ Andrea Ferrari \_\_\_\_\_

Name: Andrea Ferrari

Title: Director and Secretary

VP, Regional General Counsel Europe and  
Canada

TAKEDA PHARMACEUTICALS U.S.A., INC.

By /s/ Paul Sundberg \_\_\_\_\_

Name: Paul Sundberg

Title: Assistant Secretary

TAKEDA VENTURES, INC.

By /s/ Michael Martin \_\_\_\_\_

Name: Michael Martin

Title: President