SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

Xilio Therapeutics, Inc.

(Name of Issuer)

Common Stock, par value $0.0001 per share

(Title of Class of Securities)

(CUSIP Number)

09/30/2026

(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)

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Adage Capital Management, L.P.	
2	Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☐ (b)	
3	Sec Use Only	
4	Citizenship or Place of Organization DELAWARE	
Number of Shares Beneficially	5	Sole Voting Power 0.00

Owned by Each Reporting Person With:	6	Shared Voting Power 464,598.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 464,598.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 464,598.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11		Percent of class represented by amount in row (9) 7.06 %
12		Type of Reporting Person (See Instructions) IA, PN

SCHEDULE 13G

CUSIP No.

1		Names of Reporting Persons Robert Atchinson
2		Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☐ (b)
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 0.00
	6	Shared Voting Power 464,598.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 464,598.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 464,598.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11		Percent of class represented by amount in row (9) 7.06 %

12	Type of Reporting Person (See Instructions) HC, IN

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Phillip Gross
2	Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☐ (b)
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 0.00
	6 Shared Voting Power 464,598.00
	7 Sole Dispositive Power 0.00
	8 Shared Dispositive Power 464,598.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person 464,598.00
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11	Percent of class represented by amount in row (9) 7.06 %
12	Type of Reporting Person (See Instructions) HC, IN

SCHEDULE 13G

Item 1.	
(a)	Name of issuer: Xilio Therapeutics, Inc.
(b)	Address of issuer's principal executive offices: 828 Winter Street, Suite 300, Waltham, Massachusetts 02451
Item 2.	
(a)	Name of person filing:

This statement is filed by: (i) Adage Capital Management, L.P., a Delaware limited partnership ("ACM"), as the investment manager of Adage Capital Partners, L.P., a Delaware limited partnership ("ACP"), with respect to the common stock, par value $0.0001 per share ("Common Stock") of Xilio Therapeutics, Inc., a Delaware corporation (the "Company") directly held by ACP; (ii) Robert Atchinson ("Mr. Atchinson"), as (1) managing member of Adage Capital Advisors, L.L.C., a limited liability company organized under the laws of the State of Delaware ("ACA"), managing member of Adage Capital Partners GP, L.L.C., a limited liability company organized under the laws of the State of Delaware ("ACPGP"), general partner of ACP, and (2) managing member of Adage Capital Partners, L.L.C., a Delaware limited liability company ("ACPLLC"), general partner of ACM, with respect to the Common Stock directly held by ACP; and (iii) Phillip Gross ("Mr. Gross"), as (1) managing member of ACA, managing member of ACPGP, and (2) managing member of ACPLLC, general partner of ACM, with respect to the Common Stock directly held 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.

Address or principal business office or, if none, residence:

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

Citizenship:

(c) ACM is a limited partnership organized under the laws of the State of Delaware. Messrs. Gross and Atchinson are citizens of the United States.

Title of class of securities:

(d) Common Stock, par value $0.0001 per share

CUSIP No.:

(e)

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:

(a) ☐ Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);

(b) ☐ Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);

(c) ☐ Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);

(d) ☐ Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);

(e) ☑ An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);

(f) ☐ An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);

(g) ☑ A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);

(h) ☐ A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);

(i) ☐ A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);

(j) ☐ A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J),
please specify the type of institution:

(k) ☐ Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

Amount beneficially owned:

(a) The information required by Item 4(a) is set forth in Row 9 of the cover page for each of the Reporting Persons and is incorporated herein by reference. The percentage set forth in this Schedule 13G is calculated based upon an aggregate of 6,580,153 shares of Common Stock outstanding as of August 10, 2026, as reported in the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2026, filed with the Securities and Exchange Commission on August 12, 2026.

Percent of class:

(b) 7.06% %

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote:

The information required by Item 4(c)(i) is set forth in Row 5 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

(ii) Shared power to vote or to direct the vote:

The information required by Item 4(c)(ii) is set forth in Row 6 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

(iii) Sole power to dispose or to direct the disposition of:

The information required by Item 4(c)(iii) is set forth in Row 7 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

(iv) Shared power to dispose or to direct the disposition of:

The information required by Item 4(c)(iv) is set forth in Row 8 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

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

Item 6. Ownership of more than 5 Percent on Behalf of Another Person.

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

See Item 2(a).

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

If a parent holding company has filed this schedule, pursuant to Rule 13d-1(b)(ii)(G), so indicate under Item 3(g) and attach an exhibit stating the identity and the Item 3 classification of the relevant subsidiary. If a parent holding company has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identification of the relevant subsidiary.

See Item 2(a) and Item 3.

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 acquired and are held in the ordinary course of business and 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.

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.

Adage Capital Management, L.P.

Signature: /s/ Robert Atchinson
By: Adage Capital Partners, L.L.C., its General
Name/Title: Partner, By: Robert Atchinson, its Managing Member
Date: 11/12/2026

Robert Atchinson

Signature: /s/ Robert Atchinson
Name/Title: Robert Atchinson, individually
Date: 11/12/2026

Phillip Gross

Signature: /s/ Phillip Gross
Name/Title: Phillip Gross, individually
Date: 11/12/2026

Exhibit Information

Exhibit 99.1: Joint Filing Agreement

EXHIBIT 99.1

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 acquisition statements. 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 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.

DATED: November 12, 2026

ADAGE CAPITAL MANAGEMENT, L.P.
By: Adage Capital Partners, L.L.C.,
its General Partner

/s/ Robert Atchinson
Name: Robert Atchinson
Title: Managing Member

/s/ Robert Atchinson
ROBERT ATCHINSON, individually

/s/ Phillip Gross
PHILLIP GROSS, individually