

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

SCHEDULE 13D

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

ALX Oncology Holdings Inc.
(Name of Issuer)

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

00166B105
(CUSIP Number)

Virginia Yee
Logos Global Management LP
One Letterman Drive, Building D, Suite D3-700
San Francisco, CA 94129
Telephone: (415) 801-4660
(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

July 21, 2020
(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 sections 240.13d-1(e), 240.13d-1(f) or 140.13d-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 section 240.13d-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 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).

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

1. Names of Reporting Persons.

Logos Global Management LP

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

(a) **X**

(b) _____

3. SEC Use Only

4. Source of Funds (See Instructions) **AF**

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

6. Citizenship or Place of Organization **Delaware**

Number of
Shares
Beneficially
Owned by
Each Reporting
Person With

7. Sole Voting Power **0**

8. Shared Voting Power **3,080,901**

9. Sole Dispositive Power **0**

10. Shared Dispositive Power **3,080,901**

11. Aggregate Amount Beneficially Owned by Each Reporting Person **3,080,901**

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

13. Percent of Class Represented by Amount in Row (11) **8.4%**

14. Type of Reporting Person (See Instructions) **IA, PN**

1. Names of Reporting Persons.

Logos Global Management GP LLC

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

(a) **X**

(b) _____

3. SEC Use Only

4. Source of Funds (See Instructions) **AF**

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

6. Citizenship or Place of Organization **Delaware**

Number of
Shares
Beneficially
Owned by
Each Reporting
Person With

7. Sole Voting Power **0**

8. Shared Voting Power **3,080,901**

9. Sole Dispositive Power **0**

10. Shared Dispositive Power **3,080,901**

11. Aggregate Amount Beneficially Owned by Each Reporting Person **3,080,901**

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

13. Percent of Class Represented by Amount in Row (11) **8.4%**

14. Type of Reporting Person (See Instructions) **HC, OO**

1. Names of Reporting Persons.

Arsani William

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) **AF**

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

6. Citizenship or Place of Organization **Delaware**

Number of
Shares
Beneficially
Owned by
Each Reporting
Person With

7. Sole Voting Power **0**

8. Shared Voting Power **3,080,901**

9. Sole Dispositive Power **0**

10. Shared Dispositive Power **3,080,901**

11. Aggregate Amount Beneficially Owned by Each Reporting Person **3,080,901**

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

13. Percent of Class Represented by Amount in Row (11) **8.4%**

14. Type of Reporting Person (See Instructions) **HC, IN**

1. Names of Reporting Persons.

Graham Walmsley

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

(a) **X**

(b) _____

3. SEC Use Only

4. Source of Funds (See Instructions) **AF**

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

6. Citizenship or Place of Organization **U.S.A.**

Number of
Shares
Beneficially
Owned by
Each Reporting
Person With

7. Sole Voting Power

8. Shared Voting Power **3,080,901**

9. Sole Dispositive Power

10. Shared Dispositive Power **3,080,901**

11. Aggregate Amount Beneficially Owned by Each Reporting Person **3,080,901**

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

13. Percent of Class Represented by Amount in Row (11) **8.4%**

14. Type of Reporting Person (See Instructions) **IN, HC**

1. Names of Reporting Persons.

Logos Opportunities Fund I LP

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**

Number of
Shares
Beneficially
Owned by
Each Reporting
Person With

7. Sole Voting Power **0**

8. Shared Voting Power **2,105,901**

9. Sole Dispositive Power **0**

10. Shared Dispositive Power **2,105,901**

11. Aggregate Amount Beneficially Owned by Each Reporting Person **2,105,901**

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

13. Percent of Class Represented by Amount in Row (11) **5.8%**

14. Type of Reporting Person (See Instructions) **PN**

1. Names of Reporting Persons.

Logos Opportunities GP 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) **AF**

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

6. Citizenship or Place of Organization **Delaware**

Number of
Shares
Beneficially
Owned by
Each Reporting
Person With

7. Sole Voting Power **0**

8. Shared Voting Power **2,105,901**

9. Sole Dispositive Power **0**

10. Shared Dispositive Power **2,105,901**

11. Aggregate Amount Beneficially Owned by Each Reporting Person **2,105,901**

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

13. Percent of Class Represented by Amount in Row (11) **5.8%**

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

1. Names of Reporting Persons.

Logos GP 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) **AF**

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

6. Citizenship or Place of Organization **Delaware**

Number of
Shares
Beneficially
Owned by
Each Reporting
Person With

7. Sole Voting Power **0**

8. Shared Voting Power **2,105,901**

9. Sole Dispositive Power **0**

10. Shared Dispositive Power **2,105,901**

11. Aggregate Amount Beneficially Owned by Each Reporting Person **2,105,901**

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

13. Percent of Class Represented by Amount in Row (11) **5.8%**

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

Item 1. Security and Issuer

This statement relates to shares of Common Stock, par value \$0.001 per share (the “Stock”), of **ALX Oncology Holdings Inc.** (the “Issuer”). The principal executive office of the Issuer is located at **866 Malcolm Road, Suite 100, Burlingame, California 94010.**

Item 2. Identity and Background

The persons filing this statement and the persons enumerated in Instruction C of Schedule 13D and, where applicable, their respective places of organization, general partners, directors, executive officers and controlling persons, and the information regarding them, are as follows:

- (a) **Logos Opportunities Fund I LP (“Opportunities I”), Logos Global Management LP (“Logos Global”), Logos Opportunities GP LLC (“Logos Opportunities GP”), Logos GP LLC (“Logos GP”), Logos Global Management GP LLC (“Logos Global GP”), Arsani William and Graham Walmsley (collectively, the “Filers”).**

Opportunities I, Logos Opportunities GP and Logos GP are filing this statement jointly with the other Filers, but not as a member of a group and they expressly disclaim membership in a group. In addition, filing this Schedule 13D on behalf of Opportunities I should not be construed as an admission that it is, and it disclaims that it is, a beneficial owner, as defined in Rule 13d-3 under the Act, of any of the Stock covered by this Schedule 13D.

Each Filer also disclaims beneficial ownership of the Stock except to the extent of that person’s pecuniary interest therein.

- (b) The business address of the Filers is
One Letterman Drive, Building D, Suite D3-700, San Francisco, California 94129
- (c) Present principal occupation or employment of the Filers and the name, principal business and address of any corporation or other organization in which such employment is conducted:
Logos Global is an investment adviser to several private investment funds, including Opportunities I (collectively, the “Funds”). Logos Global GP is the general partner of Logos Global. Logos Opportunities GP is the general partner of Opportunities I. Logos GP is the manager of Logos Opportunities GP. Dr. William and Dr. Walmsley, two of the controlling persons of Logos Global and Logos GP, are the co-portfolio managers of Opportunities I, and Dr. William is the portfolio manager of the other Funds that own the Stock.
- (d) During the last five years, none of the Filers has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).
- (e) During the last five years, none of the Filers was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding 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.
- (f) For citizenship of the Filers, see Item 6 of each Filer’s cover page.

Item 3. Source and Amount of Funds or Other Consideration

Opportunities I acquired 2,105,901 shares of the Stock as a result of the automatic conversion of 2,105,901 shares of Series C Convertible Preferred Stock of the Issuer immediately prior to the completion of the Issuer's initial public offering on July 21, 2020. No additional consideration was paid for those shares of Stock.

Other Funds acquired 975,000 shares of the Stock in the Issuer's initial public offering for a purchase price of \$19.00 per share, or \$18,525,000. The other Funds paid for such shares from working capital.

Item 4. Purpose of Transaction

The Filers are filing this Schedule 13D because Dr. Walmsley is on the Issuer's board of directors. The Filers acquired the Stock for investment purposes. The Filers will routinely monitor the Issuer regarding a wide variety of factors that affect their investment considerations, including, current and anticipated future trading prices of the Stock and other securities, the Issuer's operations, assets, prospects, financial position, and business development, Issuer's management, Issuer-related competitive and strategic matters, general economic, financial market and industry conditions, and other investment considerations. Depending on their evaluation of various factors, the Filers may take such actions regarding their holdings of the Issuer's securities as they deem appropriate in light of circumstances existing from time to time. Such actions may include purchasing additional Stock in the open market, through privately negotiated transactions with third parties or otherwise, and selling at any time, in the open market, through privately negotiated transactions with third parties or otherwise, all or part of the Stock now owned or hereafter acquired by any of them. The Filers also may from time to time enter into or unwind hedging or other derivative transactions with respect to the Stock or pledge their interests in the Stock to obtain liquidity. In addition, from time to time the Filers and their representatives and advisers may communicate with other stockholders, industry participants and other interested parties about the Issuer.

The Filers have no present plan or proposal that relates to or would result in any of the actions specified in clauses (a) through (j) of Item 4 of Schedule 13D of the Act. However, the Filers may recommend action to the Issuer's management, board of directors and stockholders. Any such actions could involve one or more of the events referred to in clauses (a) through (j) of Item 4 of Schedule 13D, including, potentially, one or more mergers, consolidations, sales or acquisitions of assets, change in control, issuances, purchases, dispositions or pledges of securities or other changes in capitalization.

Item 5. Interest in Securities of the Issuer

The beneficial ownership of the Stock by each Filer on the date hereof is reflected on that Filer's cover page.

Opportunities I acquired 2,105,901 shares of the Stock as a result of the automatic conversion of 2,105,901 shares of Series C Convertible Preferred Stock of the Issuer immediately prior to the completion of the Issuer's initial public offering on July 21, 2020. In addition, other Funds purchased 975,000 shares of the Stock in the Issuer's initial public offering. The Filers did not engage in any other transaction in the Stock in the past 60 days.

**Item 6. Contracts, Arrangement, Understandings or Relationships with Respect to Securities of the Issuer
Registration Rights Agreement**

Opportunities I and certain other stockholders of the Issuer entered into an Amended and Restated Investors' Rights Agreement with the Issuer (the "Investors' Rights Agreement"), dated as of April 1, 2020. Pursuant to the Investors' Rights Agreement and subject to the terms and conditions therein, such persons have certain registration rights as set forth below.

Demand Registration Rights

The holders, including Opportunities I, of an aggregate of 24,039,473 shares of Common Stock have certain demand registration rights. At any time beginning 180 days after July 16, 2020 and before the three-year anniversary of the date of the Investors' Rights Agreement, the holders of at least 50% of the shares in the aggregate may request that the Issuer file a registration statement to register all or a portion of their shares. Such request for registration must cover at least 40% of the shares or shares with an anticipated aggregate public offering price, net of underwriting discounts and expenses, of at least \$15.0 million.

S-3 Registration Rights

The holders, including Opportunities I, of an aggregate of 24,039,473 shares of Common Stock have certain Form S-3 registration rights. At any time when the Issuer is eligible to file a registration statement on Form S-3, the holders of at least 10% of these shares can make a request that the Issuer register their shares on Form S-3 if such request covers shares with an anticipated aggregate public offering price, net of underwriting discounts and expenses, of at least \$1.0 million.

Piggyback Registration Rights

The holders, including Opportunities I, of an aggregate of 24,039,473 shares of Common Stock have certain "piggyback" registration rights. In the event that the Issuer registers any of its securities under the Securities Act, either for its own account or for the account of other security holders, the holders of these shares, including the Filers, will be entitled to certain piggyback registration rights allowing the holder to include their shares in such registration, subject to certain marketing and other limitations.

Indemnification

The Investors' Rights Agreement contains customary cross-indemnification provisions, under which the Issuer is obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to the Issuer, and they are obligated to indemnify the Issuer for material misstatements or omissions attributable to them.

Expenses of Registration

The Issuer will pay the registration expenses, other than underwriting discounts and commissions, of the shares registered by the demand, Form S-3 and piggyback registrations described above.

Termination of Registration Rights

The demand, Form S-3 and piggyback registration rights described above will expire upon the earliest of (1) the fifth anniversary after the closing of the Issuer's initial public offering, (2) a deemed liquidation event (as defined in the Issuer's amended and restated certificate of incorporation, as presently in effect) and (3) such time after the completion of the Issuer's initial public offering that such stockholder can sell all of its shares entitled to registration rights under Rule 144 of the Securities Act.

Lock-Up Agreement

In connection with the Issuer's initial public offering, the Issuer's directors and officers, including Dr. Walmsley, the Issuer's executive officers and substantially all of the Issuer's stockholders, including Opportunities I, entered into market lock-up agreements (the "Lock-up Agreements") with the underwriters for the Offering, pursuant to which they agreed, subject to certain exceptions, not to dispose of or hedge any of their Common Stock or securities convertible into or exchangeable for shares of common stock during the period from July 16, 2020 continuing through the date 180 days thereafter, except with the prior consent of Jefferies LLC, Credit Suisse Securities (USA) LLC and Piper Sandler & Co.

The foregoing description of the Investors' Rights Agreement and the Lock-Up Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of such agreements, which are incorporated herein by reference.

Item 7. Material to Be Filed as Exhibits

Exhibit A Agreement Regarding Joint Filing of Statement on Schedule 13D or 13G.

Exhibit B Amended and Restated Investor Rights Agreement among the Issuer, Opportunities I and certain other stockholders, attached as Exhibit 4.1 to the Issuer's Form S-1 Registration Statement (No. 333-239490), filed on June 26, 2020, and incorporated herein by reference.

Exhibit C Lock Up Agreement, in the form attached as Exhibit C to the Form of Underwriting Agreement attached as Exhibit 1.1 to Amendment No. 1 to the Issuer's Form S-1 Registration Statement (No. 333-239490) filed on July 13, 2020, and incorporated herein by reference.

SIGNATURES

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

Dated: August 25, 2020

/s/ Arsani William

Logos Global Management LP

By: */s/ Arsani William*
Title: Manager

Logos Global Management GP LLC

By: */s/ Arsani William*
Title: Manager

/s/ Graham Walmsley

Logos Opportunities Fund I LP

By Logos Global Management LP, its investment manager and attorney-in-fact

By: */s/ Arsani William*
Title: Manager

Logos Opportunities GP LLC

By Logos GP LLC, its Manager

By: */s/ Arsani William*
Title: Manager

Logos GP LLC

By: */s/ Arsani William*
Title: Manager

EXHIBIT A

AGREEMENT REGARDING JOINT FILING
OF STATEMENT ON SCHEDULE 13D OR 13G

The undersigned agree to file jointly with the Securities and Exchange Commission (the "SEC") any and all statements on Schedule 13D, Schedule 13G or forms 3, 4 or 5 (and any amendments or supplements thereto) required under section 13(d) or 16(a) of the Securities Exchange Act of 1934, as amended, in connection with purchases by the undersigned of the securities of any issuer. For that purpose, the undersigned hereby constitute and appoint Logos Global Management LP, a Delaware limited partnership, as their true and lawful agent and attorney-in-fact, with full power and authority for and on behalf of the undersigned to prepare or cause to be prepared, sign, file with the SEC and furnish to any other person all certificates, instruments, agreements and documents necessary to comply with section 13(d) and section 16(a) of the Act, in connection with said purchases, and to do and perform every act necessary and proper to be done incident to the exercise of the foregoing power, as fully as the undersigned might or could do if personally present.

Dated: August 25, 2020

/s/ **Arsani William**

/s/ **Graham Walmsley**

Logos Global Management LP

Logos Opportunities Fund I LP

By: */s/* **Arsani William**
Title: **Manager**

By Logos Global Management LP, its investment manager and attorney-in-fact

By: */s/* **Arsani William**
Title: **Manager**

Logos Global Management GP LLC

Logos Opportunities GP LLC

By: */s/* **Arsani William**
Title: **Manager**

By Logos GP LLC, its Manager

By: */s/* **Arsani William**
Title: **Manager**

Logos GP LLC

By: */s/* **Arsani William**
Title: **Manager**