
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934
(Amendment No.)*

Ionis Pharmaceuticals, Inc.

(Name of Issuer)

Common stock

(Title of Class of Securities)

462222100

(CUSIP Number)

December 31, 2021

(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)

* 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 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).

1.	NAMES OF REPORTING PERSONS ARK Investment Management LLC	
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware, United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5.	SOLE VOTING POWER 7,083,256
	6.	SHARED VOTING POWER 0
	7.	SOLE DISPOSITIVE POWER 7,083,256
	8.	SHARED DISPOSITIVE POWER 0
9.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 7,083,256	
10.	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.02%	
12.	TYPE OF REPORTING PERSON IA	

Item 1(a) Name of issuer:

Ionis Pharmaceuticals, Inc.

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

2855 Gazelle Court,
Carlsbad, CA 92010

Item 2(a) Name of person filing:

ARK Investment Management LLC

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

ARK Investment Management LLC
3 East 28th Street, 7th Floor
New York, NY 10016

Item 2(c) Citizenship:

Delaware, United States

Item 2(d) Title of class of securities:

Common stock

Item 2(e) CUSIP No.:

462222100

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);
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- (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);
- (k) Group, in accordance with § 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution: _____

Item 4. Ownership

- (a) Amount beneficially owned:
7,083,256
- (b) Percent of class:
5.02%
- (c) Number of shares as to which such person has:
- (i) Sole power to vote or to direct the vote: 7,083,256
 - (ii) Shared power to vote or to direct the vote: 0
 - (iii) Sole power to dispose or to direct the disposition of: 7,083,256
 - (iv) Shared power to dispose or to direct the disposition of: 0

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.

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. 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.

The reporting persons agree that this statement is filed on behalf of each of them.

Dated: February 9, 2022

ARK Investment Management LLC

By: /s/ Kellen Carter

Name: Kellen Carter

Title: Chief Compliance Officer
