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

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): May 28, 2026

IONIS PHARMACEUTICALS, INC.

(Exact Name of Registrant as Specified in Charter)

Delaware
(State or Other Jurisdiction of Incorporation)

000-19125	**33-0336973**
(Commission File No.)	(IRS Employer Identification No.)

2855 Gazelle Court
Carlsbad, CA 92010
(Address of Principal Executive Offices and Zip Code)

Registrant's telephone number, including area code: **(760) 931-9200**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol	Name of each exchange on which registered
Common Stock, $.001 Par Value	"IONS"	The Nasdaq Stock Market, LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (Section 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (Section 240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 7.01 Regulation FD Disclosure.

On May 28, 2026, Ionis Pharmaceuticals, Inc. ("***Ionis***") issued a press release announcing that its partner, GSK, reported positive pivotal data for bepirovirsen, an investigational antisense oligonucleotide ("***ASO***") for the treatment of chronic hepatitis B ("***CHB***"). A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Item 7.01 and the exhibit attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "***Exchange Act***"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, regardless of any general incorporation language in such filing.

Item 8.01 Other Events.

On May 28, 2026, Ionis announced that its partner, GSK, reported positive pivotal data for bepirovirsen, an investigational ASO for the treatment of CHB. Results from the two Phase 3 trials, B-Well 1 and B-Well 2, were simultaneously published in the *New England Journal of Medicine* and presented at the European Association for the Study of the Liver ("***EASL***") congress. GSK licensed bepirovirsen from Ionis and the two companies have collaborated on its development.

Pooled data from both trials showed that six-month treatment with bepirovirsen achieved a statistically significant and clinically meaningful 19% functional cure response rate (233 of 1,220 vs. 0 of 614 in the placebo group, with $p<0.001$ in both trials) in the overall study population (adults with ≤3000 IU/ml hepatitis B surface antigen ("***HBsAg***") level), meeting the primary endpoints. In a key secondary endpoint, a functional cure rate of 26% (200 of 768 vs. 0 of 393 in the placebo group, with $p<0.001$ in both trials) was achieved in participants with ≤1000 IU/ml HBsAg level, a group that represents approximately 45% of diagnosed CHB cases globally. The current standard of care typically requires lifelong therapy, with functional cure rates achieved in less than 1% of patients.

Functional cure occurs when the hepatitis B virus DNA and HBsAg are undetectable in the blood for at least six months after stopping all treatment. This indicates the disease is being controlled by the immune system without medication. Notably, in an exploratory analysis, 49% of bepirovirsen recipients achieved a quantitative hepatitis B surface antigen ("***qHBsAg***") of ≤100 IU/mL one year after the end of treatment. Medical literature has linked this level of low surface antigen with increased immune control and improved patient outcomes. Moreover, 23% of all bepirovirsen recipients (283 of 1220 vs 0 of 614 in the placebo group; $p<0.001$ in both trials) and 31% of bepirovirsen recipients with baseline HBsAg ≤1000 IU/mL % (237 of 768 vs 0 of 393 in the placebo group; $p<0.001$ in both trials) achieved a sustained DNA lower limit of quantification (<LLOQ) at week 72 after stopping all treatment at week 48.

The trials showed an acceptable safety and tolerability profile consistent with other studies of bepirovirsen. The three most frequently observed adverse events were injection site erythema, local pain and temporary rise in the blood level of a liver enzyme.

Results from the two trials are summarized in Table 1.

Table 1: Functional cure rate at Week 72 in B-Well 1 and B-Well 2 by patient segment

Endpoint	Patients with baseline HBsAg ≤3000 U/mL	Patients with baseline HBsAg ≤1000 IU/mL
FC response rate at Week 72, 6 months after discontinuing all treatments	Primary confirmatory endpoint **19% vs. 0% (placebo)** 233 of 1,220 vs. 0 of 614 B-Well 1: 20% vs. 0% [127 of 650 vs. 0 of 328] B-Well 2: 19% vs. 0% [106 of 570 vs. 0 of 286]	Ranked secondary endpoint **26% vs. 0% (placebo)** 200 of 768 vs. 0 of 393 B-Well 1: 25% vs. 0% [105 of 426 vs. 0 of 214] B-Well 2: 28% vs. 0% [95 of 342 vs. 0 of 179]

Bepirovirsen is currently under priority review by the U.S. Food and Drug Administration (FDA) with both Breakthrough and Fast Track Designation. It is also under review by regulatory authorities in Europe, Japan with SENKU designation and China with Breakthrough Therapy and Priority Review designation. GSK anticipates the first regulatory decisions in Q3 2026 and launch preparations are underway.

GSK licensed bepirovirsen from Ionis in 2019 under a collaborative development and licensing agreement. Under the terms of the agreement, Ionis has received an upfront payment, license fee and development and regulatory milestone payments and is eligible to receive additional regulatory and sales milestone payments as well as tiered royalties of 10-12% on net sales of bepirovirsen.

Forward-Looking Statements

Certain statements contained in this report are forward-looking statements that involve a number of risks and uncertainties. Such forward-looking statements include, without limitation, statements regarding Ionis' business and the therapeutic and commercial potential of bepirovirsen, our commercial medicines, additional medicines in development and technologies and our expectations regarding development and regulatory milestones. Any statement describing Ionis' goals, expectations, financial or other projections, intentions or beliefs is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties including those inherent in the process of discovering, developing and commercializing medicines that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such medicines. Ionis' forward-looking statements also involve assumptions that, if they never materialize or prove correct, could cause its results to differ materially from those expressed or implied by such forward-looking statements. Although Ionis' forward-looking statements reflect the good faith judgment of its management, these statements are based only on facts and factors currently known by Ionis. Except as required by law, we undertake no obligation to update any forward-looking statements for any reason. As a result, you are cautioned not to rely on these forward-looking statements. These and other risks concerning Ionis' programs are described in additional detail in Ionis' annual report on Form 10-K for the year ended December 31, 2025, and most recent Form 10-Q, which are on file with the Securities and Exchange Commission. Copies of these and other documents are available from the Company. In this press release, unless the context requires otherwise, "Ionis," "Company," "we," "our" and "us" all refer to Ionis Pharmaceuticals and its subsidiaries.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Press Release dated May 28, 2026.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

IONIS PHARMACEUTICALS, INC.

Dated: May 28, 2026

By: /s/ Patrick R. O'Neil

PATRICK R. O'NEIL

Executive Vice President, Chief Legal Officer and General Counsel

Exhibit 99.1

Ionis partner GSK announces bepirovirsen achieves unprecedented functional cure rates with potential to redefine treatment for chronic hepatitis B

– Pivotal B-Well data show significant 19% functional cure rate in the overall study population and 26% in patients with lower viral activity, compared to 0% with standard of care –
– 49% of bepirovirsen recipients achieved a surface antigen level of ≤100 IU/mL one year after end of treatment in exploratory analysis –
– A loss in surface antigen is associated with a significant reduction in risk of liver cancer –
– Over 240 million people worldwide live with chronic hepatitis B –

CARLSBAD, Calif., May 28, 2026 -- Ionis Pharmaceuticals, Inc. (Nasdaq: IONS) partner GSK today announced positive pivotal data for bepirovirsen, an investigational antisense oligonucleotide (ASO) for the treatment of chronic hepatitis B (CHB). Results from the two Phase 3 trials, B-Well 1 and B-Well 2, were simultaneously published in the *New England Journal of Medicine* and presented at the European Association for the Study of the Liver (EASL) congress. GSK licensed bepirovirsen from Ionis and the two companies have collaborated on its development.

Pooled data from both trials showed that six-month treatment with bepirovirsen achieved a statistically significant and clinically meaningful 19% functional cure response rate (233 of 1,220 vs. 0 of 614 in the placebo group, with $p<0.001$ in both trials) in the overall study population (adults with ≤3000 IU/ml hepatitis B surface antigen (HBsAg) level), meeting the primary endpoints. In a key secondary endpoint, a functional cure rate of 26% (200 of 768 vs. 0 of 393 in the placebo group, with $p<0.001$ in both trials) was achieved in participants with ≤1000 IU/ml HBsAg level, a group that represents approximately 45% of diagnosed CHB cases globally. The current standard of care typically requires lifelong therapy, with functional cure rates achieved in less than 1% of patients.

Functional cure occurs when the hepatitis B virus DNA and HBsAg are undetectable in the blood for at least six months after stopping all treatment. This indicates the disease is being controlled by the immune system without medication. Notably, in an exploratory analysis, 49% of bepirovirsen recipients achieved a quantitative hepatitis B surface antigen (qHBsAg) of ≤100 IU/mL one year after the end of treatment. Medical literature has linked this level of low surface antigen with increased immune control and improved patient outcomes.7 Moreover, 23% of all bepirovirsen recipients (283 of 1220 vs 0 of 614 in the placebo group; $p<0.001$ in both trials) and 31% of bepirovirsen recipients with baseline HBsAg ≤1000 IU/mL % (237 of 768 vs 0 of 393 in the placebo group; $p<0.001$ in both trials) achieved a sustained DNA lower limit of quantification (<LLOQ) at week 72 after stopping all treatment at week 48.

The trials showed an acceptable safety and tolerability profile consistent with other studies of bepirovirsen. The three most frequently observed adverse events were injection site erythema, local pain and temporary rise in the blood level of a liver enzyme.

“These results represent an important advance for the millions of people living with chronic hepatitis B, for whom there is currently no approved therapy that can achieve a meaningful functional cure,” said Brett P. Monia, Ph.D., chief executive officer, Ionis. “At Ionis, we are focused on translating our science into breakthrough medicines with the potential to make a real difference for people living with serious conditions, like chronic hepatitis B. Bepirovirsen is uniquely positioned to address this persistent viral infection through its potential to reduce hepatitis B virus replication, suppress hepatitis B surface antigen and stimulate the immune system. Thank you to the patients, families and clinicians who participated in these important studies.”

Results from the two trials are summarized in Table 1.

Table 1: Functional cure rate at Week 72 in B-Well 1 and B-Well 2 by patient segment

Endpoint	Patients with baseline HBsAg ≤3000 U/mL	Patients with baseline HBsAg ≤1000 IU/mL
FC response rate at Week 72, 6 months after discontinuing all treatments	Primary confirmatory endpoint **19% vs. 0% (placebo)** 233 of 1,220 vs. 0 of 614 B-Well 1: 20% vs. 0% [127 of 650 vs. 0 of 328] B-Well 2: 19% vs. 0% [106 of 570 vs. 0 of 286]	Ranked secondary endpoint **26% vs. 0% (placebo)** 200 of 768 vs. 0 of 393 B-Well 1: 25% vs. 0% [105 of 426 vs. 0 of 214] B-Well 2: 28% vs. 0% [95 of 342 vs. 0 of 179]

Bepirovirsen is currently under priority review by the U.S. Food and Drug Administration (FDA) with both Breakthrough and Fast Track Designation. It is also under review by regulatory authorities in Europe, Japan with SENKU designation and China with Breakthrough Therapy and Priority Review designation. GSK anticipates the first regulatory decisions in Q3 2026 and launch preparations are underway.

GSK licensed bepirovirsen from Ionis in 2019 under a collaborative development and licensing agreement. Under the terms of the agreement, Ionis has received an upfront payment, license fee and development and regulatory milestone payments and is eligible to receive additional regulatory and sales milestone payments as well as tiered royalties of 10-12% on net sales of bepirovirsen.

About B-Well 1 and B-Well 2

B-Well 1 (NCT05630807) and B-Well 2 (NCT05630820) trials are global multi-center, randomized, double-blind, placebo-controlled trials conducted in 29 countries. They assessed the efficacy, safety, pharmacokinetic profile, and durability of functional cure in nucleos(t)ide analogue-treated adult participants with chronic hepatitis B and baseline surface antigen (HBsAg) ≤3000 IU/ml. The primary endpoint assessed the proportion of participants achieving functional cure in patients with baseline HBsAg ≤3000 IU/ml. A key ranked secondary endpoint evaluated functional cure in participants with baseline HBsAg ≤1000 IU/ml. Functional cure is defined as HBsAg being undetectable in the blood for at least 24 weeks after stopping all treatment, indicating that the disease is controlled by the immune system without medication.

About Chronic Hepatitis B (CHB)

Hepatitis B is a viral infection that can cause both acute and chronic liver disease. Chronic hepatitis B occurs when the immune system is unable to clear the virus, resulting in long-lasting infection that affects more than 240 million people worldwide, including 1.7 million people in the U.S. and 75 million in China. The disease causes approximately 1.1 million deaths each year, and accounts for approximately 56% of liver cancer cases globally. Currently, many patients often require lifelong antiviral therapy for viral suppression, making functional cure a critical goal in disease management.

About bepirovirsen
Bepirovirsen is an investigational antisense oligonucleotide (ASO) designed to recognize and inhibit the production of the genetic components (i.e. RNA) of the hepatitis B virus that can lead to chronic disease, potentially allowing a person's immune system to regain control. Bepirovirsen reduces the production of RNA and viral proteins associated with HBV, suppresses the level of hepatitis B surface antigen (HBsAg) in the blood, and stimulates the immune system to increase the chances of a durable and sustained response.

About Ionis Pharmaceuticals, Inc.
For three decades, Ionis has invented medicines that bring better futures to people with serious diseases. Ionis has marketed medicines and a leading pipeline in neurology, cardiometabolic and other areas of high patient need. As the pioneer in RNA-targeted medicines, Ionis continues to drive innovation in RNA therapies in addition to advancing new approaches in gene editing. A deep understanding of disease biology and industry-leading technology propels our work, coupled with a passion and urgency to deliver life-changing advances for patients. To learn more about Ionis, visit Ionis.com and follow us on X (Twitter), LinkedIn and Instagram.

Ionis Forward-looking Statements
This press release includes forward-looking statements regarding Ionis' business and the therapeutic and commercial potential of bepirovirsen, our commercial medicines, additional medicines in development and technologies and our expectations regarding development and regulatory milestones. Any statement describing Ionis' goals, expectations, financial or other projections, intentions or beliefs is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties including those inherent in the process of discovering, developing and commercializing medicines that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such medicines. Ionis' forward-looking statements also involve assumptions that, if they never materialize or prove correct, could cause its results to differ materially from those expressed or implied by such forward-looking statements. Although Ionis' forward-looking statements reflect the good faith judgment of its management, these statements are based only on facts and factors currently known by Ionis. Except as required by law, we undertake no obligation to update any forward-looking statements for any reason. As a result, you are cautioned not to rely on these forward-looking statements. These and other risks concerning Ionis' programs are described in additional detail in Ionis' annual report on Form 10-K for the year ended December 31, 2025, and most recent Form 10-Q, which are on file with the Securities and Exchange Commission. Copies of these and other documents are available from the Company. In this press release, unless the context requires otherwise, "Ionis," "Company," "we," "our" and "us" all refer to Ionis Pharmaceuticals and its subsidiaries. Ionis Pharmaceuticals® is a trademark of Ionis Pharmaceuticals, Inc.

Ionis Investor Contact:
D. Wade Walke, Ph.D.
IR@ionis.com
760-603-2331

Ionis Media Contact:
Hayley Soffer
media@ionis.com
760-603-4679

###