

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): February 19, 2025

IONIS PHARMACEUTICALS, INC.

(Exact Name of Registrant as Specified in Charter)

Delaware

(State or Other Jurisdiction of Incorporation)

000-19125

(Commission File No.)

33-0336973

(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 2.02 Results of Operations and Financial Condition.

On February 19, 2025, Ionis Pharmaceuticals, Inc. (the “*Company*”) issued a press release announcing the Company’s financial results for the quarter and fiscal year ended December 31, 2024. In addition to disclosing results that are determined in accordance with Generally Accepted Accounting Principles (“*GAAP*”), the Company also discloses pro forma or non-GAAP results of operations, which are adjusted from GAAP to exclude non-cash compensation expense related to equity awards and the related tax effects. The Company is presenting pro forma information excluding non-cash compensation expense and the related tax effects because the Company believes it better enables financial statement users to assess and compare its historical performance and project its future operating results and cash flows. A copy of the release is furnished with this report as an exhibit pursuant to “Item 2.02. Results of Operations and Financial Condition” of Form 8-K in accordance with SEC Release Nos. 33-8216 and 34-47583.

The information in this Current Report on Form 8-K and the Exhibit attached hereto shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (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 or the Exchange Act, regardless of any general incorporation language in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release dated February 19, 2025.
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: February 19, 2025

By: /s/ Patrick R. O'Neil

PATRICK R. O'NEIL

Executive Vice President, Chief Legal Officer and General Counsel



Ionis reports fourth quarter and full year 2024 financial results

- First independent launch underway following TRYNGOLZATM approval -
- Second independent launch on track with donidalorsen PDUFA August 21, 2025 -
- WAINUATM U.S. launch delivering accelerating sequential growth -
- Ionis exceeds 2024 financial guidance and provides full year 2025 guidance -

CARLSBAD, Calif., February 19, 2025 – Ionis Pharmaceuticals, Inc. (Nasdaq: IONS) (the “Company”) today reported financial results for the fourth quarter and full year ended December 31, 2024.

“With the recent launch of our first independent medicine, TRYNGOLZA for familial chylomicronemia syndrome, Ionis has begun a new chapter as a fully integrated commercial-stage biotechnology company,” said Brett P. Monia, Ph.D., chief executive officer, Ionis. “Over the next three years, we expect three more independent launches, including donidalorsen later this year for hereditary angioedema and olezarsen for severe hypertriglyceridemia in 2026, pending Phase 3 results in the second half of this year. Additionally, our partners are on track to launch four Ionis-discovered medicines over the same time period, including several that address broad patient populations. Ionis continues to advance our next wave of potentially transformational wholly owned medicines, including ION582 for Angelman syndrome, which is on track to start Phase 3 development in the first half of this year. Our recent achievements, combined with our strong commercial execution and advancing pipeline, position Ionis to deliver increasing value for all our stakeholders.”

Fourth Quarter and Full Year 2024 Summary Financial Results⁽¹⁾:

	Three months ended December 31,		Year ended December 31,	
	2024	2023	2024	2023
	(amounts in millions)			
Total revenue	\$ 227	\$ 325	\$ 705	\$ 788
Operating expenses	\$ 337	\$ 331	\$ 1,180	\$ 1,141
Operating expenses on a non-GAAP basis	\$ 301	\$ 305	\$ 1,050	\$ 1,035
Loss from operations	\$ (110)	\$ (6)	\$ (475)	\$ (353)
Income (Loss) from operations on a non-GAAP basis	\$ (74)	\$ 20	\$ (345)	\$ (247)

(1) Reconciliation of GAAP to non-GAAP basis contained later in this release.

Financial Highlights

- Revenue for the year ended December 31, 2024 substantially exceeded guidance as Ionis continued to generate revenue from diverse sources. Ionis added new sources of revenue in 2024 with the launch of WAINUA and TRYNGOLZA in the U.S. in late January and late December, respectively
- Operating expenses for the year ended December 31, 2024 were in line with expectations with increased expenses from commercialization efforts for WAINUA, TRYNGOLZA and donidalorsen
- Cash, cash equivalents and short-term investments of \$2.3 billion as of December 31, 2024 exceeded revised guidance and enable continued investments to support ongoing and upcoming planned launches and advancing wholly owned medicines in development

Recent Highlights- Marketed Medicines

- TRYNGOLZATM (olezarsen) launch underway following approval on December 19, 2024 in the U.S as first-ever treatment for adults living with familial chylomicronemia syndrome (FCS) as an adjunct to diet
- WAINUATM (eplontersen) (WAINZUA in EU) for the treatment of adults with polyneuropathy of hereditary transthyretin-mediated amyloidosis (ATTRv-PN) achieved multiple commercial and regulatory milestones:
 - o Generated sales of \$85 million resulting in royalty revenue of \$20 million in the year ended December 31, 2024. Substantial sequential growth throughout 2024 as launch progressed, including an 84% increase in product sales in the fourth quarter, compared to the third quarter
 - o Launch underway in numerous countries, including the UK, following approval by the Medicines and Healthcare products Regulatory Agency (MHRA) with an accelerated National Institute for Health and Care Excellence (NICE) recommendation
 - o Received positive Committee for Medicinal Products for Human Use (CHMP) opinion from European Medicines Agency (EMA) for the treatment of hereditary transthyretin-mediated amyloidosis in adult patients with stage 1 or stage 2 polyneuropathy
- SPINRAZA[®] (nusinersen) for the treatment of spinal muscular atrophy (SMA) generated global sales of \$1.6 billion resulting in royalty revenue of \$216 million in year ended December 31, 2024. Product sales increased 2% in the fourth quarter of 2024, compared to the same period in 2023
 - o Higher dose nusinersen under regulatory review in U.S. (PDUFA date of September 22, 2025) and EU
- QALSODY[®] (tofersen) for the treatment of SOD1-ALS generated global sales of \$32 million resulting in royalty revenue of \$4 million in the year ended December 31, 2024. Product sales grew sequentially throughout 2024
 - o Granted marketing approval in China and Japan

Recent Highlights- Late-Stage Pipeline

- Olezarsen on track for Phase 3 data in patients with severe hypertriglyceridemia (sHTG) in H2:2025, positioning it to potentially treat this second more prevalent patient population with urgent unmet need
- Olezarsen and donidalorsen Canadian commercialization rights licensed to Theratechnologies

- Donidalorsen on track for potential launch this year as the first RNA-targeted prophylactic treatment for people with hereditary angioedema (HAE):
 - Under review in U.S. (PDUFA date of August 21, 2025) and EU
 - Presented positive Phase 2 open label extension (OLE) study data demonstrating an overall sustained mean reduction in HAE attack rates of 96% in patients treated up to three years with every four weeks or every eight weeks dosing
- ION582 on track to initiate Phase 3 development in Angelman syndrome (AS) in H1:2025
- Ulefnersen global commercialization rights licensed to Otsuka; Phase 3 development ongoing for the treatment of patients with FUS-ALS

Fourth Quarter, Full Year 2024 Financial Results and 2025 Financial Guidance

“In 2024, we exceeded our revenue guidance due to our continued pipeline and technology successes, which drove a smaller than anticipated operating loss. Importantly, we added two new sources of commercial revenue with TRYNGOLZA product revenue from Ionis’ first independent launch and WAINUA royalties,” said Elizabeth L. Hougen, chief financial officer, Ionis. “In 2025, we will continue to invest in go-to-market activities for TRYNGOLZA for FCS and scale our resources to support our next planned launches, including donidalorsen for hereditary angioedema later this year. At the same time, we are investing in our next wave of medicines, including Phase 3 development and pre-commercialization activities for ION582 for Angelman syndrome. These important investments position Ionis to deliver substantial and growing product revenue; and when combined with increasing royalty revenue from anticipated partner launches, provides us with a clear path to achieve sustained positive cash flow.”

Revenue

Ionis’ revenue was comprised of the following:

	Three months ended December 31,		Year ended December 31,	
	2024	2023	2024	2023
Revenue:	(amounts in millions)			
Commercial revenue:				
SPINRAZA royalties	\$ 64	\$ 62	\$ 216	\$ 240
WAINUA royalties	10	-	20	-
Other commercial revenue:				
TEGSEDI and WAYLIVRA revenue, net	8	9	34	35
Other revenue	4	8	23	34
Total commercial revenue	86	79	293	309
Research and development revenue:				
Amortization from upfront payments	27	76	132	125
Milestone payments	30	11	106	101
License fees	34	92	71	117
Other services	6	-	24	10
Collaborative agreement revenue	97	179	333	353
WAINUA joint development revenue	44	67	79	126
Total research and development revenue	141	246	412	479
Total revenue	\$ 227	\$ 325	\$ 705	\$ 788

Commercial revenue for the year ended December 31, 2024 included new sources of commercial revenue with the launch of WAINUA in the U.S. in late January 2024 and the launch of TRYNGOLZA in the U.S. in late December 2024. SPINRAZA product sales in the U.S. increased slightly in 2024 compared to 2023. SPINRAZA product sales outside of the U.S. were impacted from an annual order from a single country that did not recur in 2024.

R&D revenue decreased for the year ended December 31, 2024 compared to 2023 primarily due to the decrease in WAINUA joint development revenue as development activities relating to ATTRv-PN wound down with the launch of WAINUA.

Operating Expenses

Ionis' operating expenses increased slightly for the year ended December 31, 2024 compared to 2023. SG&A expenses increased year over year primarily due to the launches of WAINUA and TRYNGOLZA, and advancing launch preparation activities for donidalorsen. R&D expenses were flat year over year.

Balance Sheet

As of December 31, 2024, Ionis' cash, cash equivalents and short-term investments were \$2.3 billion, consistent with December 31, 2023. In September 2024, Ionis generated gross proceeds of \$500 million from a public offering of its common stock. Ionis' working capital increased as of December 31, 2024, compared to December 31, 2023 primarily from the Company's lower current liabilities as a result of lower deferred contract revenue.

2025 Financial Guidance

The Company's 2025 financial guidance reflects its evolution to a fully integrated commercial-stage biotechnology company independently launching its first medicine, TRYNGOLZA, and advancing commercialization efforts for multiple additional upcoming planned launches. As a result, the Company expects to earn substantial revenue from numerous diverse sources, with a shift toward increasing commercial revenue. Additionally, the Company expects a modest increase in its non-GAAP operating expenses in line with its plan to invest in the Company's independent launches and advance its wholly owned pipeline of innovative medicines. The Company expects that these investments will enable Ionis to deliver accelerating value.

Full Year 2025 Guidance

Revenue	>\$600 million
Operating loss on a non-GAAP basis	<\$495 million
Cash, cash equivalents and short-term investments	~\$1.7 billion

Webcast

Management will host a conference call and webcast to discuss Ionis' fourth quarter and full year 2024 results at 11:30 a.m. Eastern time on Wednesday, February 19, 2025. Interested parties may access the webcast [here](#). A webcast replay will be available for a limited time at the same address. To access the Company's fourth quarter and full year 2024 earnings slides click [here](#).

For more information about SPINRAZA and QALSODY, visit <https://www.spinraza.com/> and <https://www.qalsody.com/>, respectively. QALSODY is approved under accelerated approval based on reduction in plasma neurofilament light chain (NFL) observed in patients treated with QALSODY. Continued approval may be contingent upon verification of clinical benefit in confirmatory trial(s).

INDICATION for TRYNGOLZA™ (olezarsen)

TRYNGOLZA™ (olezarsen) was approved by the U.S. Food and Drug Administration as an adjunct to diet to reduce triglycerides in adults with familial chylomicronemia syndrome (FCS).

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS

TRYNGOLZA is contraindicated in patients with a history of serious hypersensitivity to TRYNGOLZA or any of the excipients in TRYNGOLZA. Hypersensitivity reactions requiring medical treatment have occurred.

WARNINGS AND PRECAUTIONS

Hypersensitivity Reactions

Hypersensitivity reactions (including symptoms of bronchospasm, diffuse erythema, facial swelling, urticaria, chills and myalgias) have been reported in patients treated with TRYNGOLZA. Advise patients on the signs and symptoms of hypersensitivity reactions and instruct patients to promptly seek medical attention and discontinue use of TRYNGOLZA if hypersensitivity reactions occur.

ADVERSE REACTIONS

The most common adverse reactions (incidence >5% of TRYNGOLZA-treated patients and >3% higher frequency than placebo) were injection site reactions, decreased platelet count and arthralgia.

Please see full [Prescribing Information](#) for TRYNGOLZA.

INDICATION for WAINUA™ (eplontersen)

WAINUA injection, for subcutaneous use, 45 mg is indicated for the treatment of the polyneuropathy of hereditary transthyretin-mediated amyloidosis in adults.

IMPORTANT SAFETY INFORMATION for WAINUA™ (eplontersen)

WARNINGS AND PRECAUTIONS

Reduced Serum Vitamin A Levels and Recommended Supplementation WAINUA leads to a decrease in serum vitamin A levels. Supplement with recommended daily allowance of vitamin A. Refer patient to an ophthalmologist if ocular symptoms suggestive of vitamin A deficiency occur.

ADVERSE REACTIONS

Most common adverse reactions ($\geq 9\%$ in WAINUA-treated patients) were vitamin A decreased (15%) and vomiting (9%).

Please see link to U.S. Full [Prescribing Information](#) for WAINUA.

About Ionis Pharmaceuticals, Inc.

For three decades, Ionis has invented medicines that bring better futures to people with serious diseases. Ionis currently has six marketed medicines and a leading pipeline in neurology, cardiology and select 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](https://www.ionis.com) and follow us on [X \(Twitter\)](#), [LinkedIn](#) and [Instagram](#).

Ionis' Forward-looking Statement

This press release includes forward-looking statements regarding Ionis' business, financial guidance and the therapeutic and commercial potential of our commercial medicines, additional medicines in development and technologies. 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, 2023, 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 registered trademark of Ionis Pharmaceuticals, Inc. TRYNGOLZA™ is a trademark of Ionis Pharmaceuticals, Inc. Akcea Therapeutics® is a registered trademark of Akcea Therapeutics, Inc. TEGSEDI® is a registered trademark of Akcea Therapeutics, Inc. WAYLIVRA® is a registered trademark of Akcea Therapeutics, Inc. SPINRAZA® and QALSODY® are registered trademarks of Biogen. WAINUA™ is a registered trademark of the AstraZeneca group of companies.

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IONIS PHARMACEUTICALS, INC.
SELECTED FINANCIAL INFORMATION
Condensed Consolidated Statements of Operations
(In Millions, Except Per Share Data)

	Three months ended December 31,		Year ended December 31,	
	2024	2023	2024	2023
	(unaudited)			
Revenue:				
Commercial revenue:				
SPINRAZA royalties	\$ 64	\$ 62	\$ 216	\$ 240
WAINUA royalties	10	-	20	-
Other commercial revenue	12	17	57	69
Total commercial revenue	<u>86</u>	<u>79</u>	<u>293</u>	<u>309</u>
Research and development revenue:				
Collaborative agreement revenue	97	179	333	353
WAINUA joint development revenue	44	67	79	126
Total research and development revenue	<u>141</u>	<u>246</u>	<u>412</u>	<u>479</u>
Total revenue	<u>227</u>	<u>325</u>	<u>705</u>	<u>788</u>
Expenses:				
Cost of sales	4	3	11	9
Research, development and patent	245	257	902	900
Selling, general and administrative	88	71	267	232
Total operating expenses	<u>337</u>	<u>331</u>	<u>1,180</u>	<u>1,141</u>
Loss from operations	(110)	(6)	(475)	(353)
Other income (expense):				
Interest expense related to the sale of future royalties	(19)	(18)	(73)	(69)
Other income, net	22	21	88	88
Loss before income tax benefit (expense)	<u>(107)</u>	<u>(3)</u>	<u>(460)</u>	<u>(334)</u>
Income tax benefit (expense)	3	(6)	6	(32)
Net loss	<u>\$ (104)</u>	<u>\$ (9)</u>	<u>\$ (454)</u>	<u>\$ (366)</u>
Basic and diluted net loss per share	<u>\$ (0.66)</u>	<u>\$ (0.06)</u>	<u>\$ (3.04)</u>	<u>\$ (2.56)</u>
Shares used in computing basic and diluted net loss per share	<u>158</u>	<u>144</u>	<u>150</u>	<u>143</u>

IONIS PHARMACEUTICALS, INC.
Reconciliation of GAAP to Non-GAAP Basis:
Condensed Consolidated Operating Expenses, Loss From Operations, and Net Loss
(In Millions)

	Three months ended December 31,		Year ended December 31,	
	2024	2023	2024	2023
	(unaudited)			
As reported research, development and patent expenses according to GAAP	\$ 245	\$ 257	\$ 902	\$ 900
Excluding compensation expense related to equity awards	(25)	(20)	(92)	(78)
Non-GAAP research, development and patent expenses	<u>\$ 220</u>	<u>\$ 237</u>	<u>\$ 810</u>	<u>\$ 822</u>
As reported selling, general and administrative expenses according to GAAP	\$ 88	\$ 71	\$ 267	\$ 232
Excluding compensation expense related to equity awards	(11)	(6)	(37)	(27)
Non-GAAP selling, general and administrative expenses	<u>\$ 77</u>	<u>\$ 65</u>	<u>\$ 230</u>	<u>\$ 205</u>
As reported operating expenses according to GAAP	\$ 337	\$ 331	\$ 1,180	\$ 1,141
Excluding compensation expense related to equity awards	(36)	(26)	(130)	(106)
Non-GAAP operating expenses	<u>\$ 301</u>	<u>\$ 305</u>	<u>\$ 1,050</u>	<u>\$ 1,035</u>
As reported loss from operations according to GAAP	\$ (110)	\$ (6)	\$ (475)	\$ (353)
Excluding compensation expense related to equity awards	(36)	(26)	(130)	(106)
Non-GAAP loss from operations	<u>\$ (74)</u>	<u>\$ 20</u>	<u>\$ (345)</u>	<u>\$ (247)</u>
As reported net loss according to GAAP	\$ (104)	\$ (9)	\$ (454)	\$ (366)
Excluding compensation expense related to equity awards and related tax effects	(36)	(26)	(130)	(106)
Non-GAAP net loss	<u>\$ (68)</u>	<u>\$ 17</u>	<u>\$ (324)</u>	<u>\$ (260)</u>

Reconciliation of GAAP to Non-GAAP Basis

As illustrated in the Selected Financial Information in this press release, non-GAAP operating expenses, non-GAAP loss from operations, and non-GAAP net loss were adjusted from GAAP to exclude compensation expense related to equity awards and the related tax effects. Compensation expense related to equity awards are non-cash. These measures are provided as supplementary information and are not a substitute for financial measures calculated in accordance with GAAP. Ionis reports these non-GAAP results to better enable financial statement users to assess and compare its historical performance and project its future operating results and cash flows. Further, the presentation of Ionis' non-GAAP results is consistent with how Ionis' management internally evaluates the performance of its operations.

IONIS PHARMACEUTICALS, INC.
Condensed Consolidated Balance Sheets
(In Millions)

	December 31, 2024	December 31, 2023
	(unaudited)	
Assets:		
Cash, cash equivalents and short-term investments	\$ 2,298	\$ 2,331
Contracts receivable	92	98
Other current assets	230	213
Property, plant and equipment, net	94	71
Right-of-use assets	162	172
Other assets	127	105
Total assets	\$ 3,003	\$ 2,990
Liabilities and stockholders' equity:		
Current portion of deferred contract revenue	\$ 79	\$ 151
0.125% convertible senior notes, net – short-term	-	44
Other current liabilities	229	253
1.75% convertible senior notes, net	565	562
0% convertible senior notes, net	629	625
Liability related to sale of future royalties, net	542	514
Long-term lease liabilities	162	171
Long-term obligations, less current portion	52	42
Long-term deferred contract revenue	157	241
Total stockholders' equity	588	387
Total liabilities and stockholders' equity	\$ 3,003	\$ 2,990

Key 2025 and 2026 Value Driving Events⁽¹⁾

New Product Launches			
Program	Indication	2025	2026
Donidalorsen (U.S.)	HAE	•	
TRYNGOLZA (U.S.)	FCS	Achieved	
WAINZUA (EU)	ATTRv-PN	•	
Olezarsen (U.S.)	sHTG		•
Zilganersen (U.S.)	Alexander disease		•

Regulatory Actions				
Program	Indication	Regulatory Action	2025	2026
Donidalorsen	HAE	U.S. approval decision	•	
		EU approval decision		•
TRYNGOLZA	FCS	EU approval decision	•	
Olezarsen	sHTG	U.S. submission	•	
		U.S. approval decision		•
Zilganersen	Alexander disease	U.S. submission		•
		U.S. approval decision		•
Nusinersen (higher dose)	SMA	U.S. and EU submissions	Achieved	
		U.S. approval decision	•	
WAINZUA	ATTRv-PN	EU approval decision	•	
Pelacarsen	Lp(a)-CVD	U.S. submission		•
Bepirovirsen	HBV	Regulatory submission(s)		•
		Regulatory decision(s)		•

Key Phase 3 Clinical Events				
Program	Indication	Event	2025	2026
Olezarsen	sHTG	CORE, CORE2 and Essence data	•	
Zilganersen	Alexander disease	Phase 3 data	•	
ION582	Angelman syndrome	Phase 3 study start	•	
		Phase 3 enrollment completion		•
Pelacarsen	Lp(a)-CVD	HORIZON data		•
Bepirovirsen	HBV	B-Well data		•
Eplontersen	ATTR-CM	CARDIO-TTRansform data		•
Sefaxersen	IgAN	IMAGINATION data		•
Ulefnersen	FUS-ALS	Phase 3 data		•

(1) Timing expectations based on current assumptions and subject to change.

- Indicates that the milestone is anticipated in the respective year

#