Ionis and Royalty Pharma enter into royalty agreement for up to $1.1 billion to further advance Ionis' genetic medicines and commercial readiness

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- *Royalty Pharma to acquire an interest in SPINRAZA® and pelacarsen royalties -- Ionis retains majority of royalties and all milestones from Novartis for pelacarsen*
- *Royalty Pharma to pay Ionis $500 million upfront and up to $625 million in milestones*
- *Agreement enables Ionis to achieve commercial readiness for multiple late-stage programs and advance its innovative pipeline of genetic medicines*

CARLSBAD, Calif. and NEW YORK, Jan. 9, 2023 /PRNewswire/ -- Ionis Pharmaceuticals, Inc. (Nasdaq: IONS) and Royalty Pharma plc (Nasdaq: RPRX) today announced that Royalty Pharma has acquired an interest in Ionis' royalty in Biogen's SPINRAZA® (nusinersen) and Novartis' pelacarsen for up to $1.125 billion, including an upfront payment of $500 million and up to $625 million in additional pelacarsen milestone payments.

SPINRAZA is the global foundation of care for the treatment of people living with spinal muscular atrophy (SMA). Biogen licensed SPINRAZA from Ionis in 2016. Pelacarsen is a potentially first-in-class treatment specifically targeting elevated lipoprotein(a), or Lp(a), an independent, inherited, and causal risk factor for cardiovascular disease. Novartis licensed pelacarsen from Ionis in 2019.

"This transaction provides us with significant capital to reach our strategic objectives, the first of which is to achieve commercial readiness for our late-stage programs eplontersen, olezarsen and donidalorsen. It also enables us to further advance our deep and innovative pipeline so that we can continue to deliver a steady cadence of new genetic medicines to the market," said Brett P. Monia, Ph.D., chief executive officer of Ionis. "Royalty Pharma's investment underscores their confidence in SPINRAZA's resilience as an important therapy for the treatment of SMA. It also demonstrates their belief in pelacarsen's potential to be a first-in-class treatment for Lp(a)-driven cardiovascular disease, representing a multibillion-dollar commercial opportunity. Furthermore, because Ionis retains a majority interest in SPINRAZA and pelacarsen royalties, we maintain our ability to benefit significantly from the potential commercial upside of both products."

"We are thrilled to partner with Ionis, an innovator in genetic medicine. This investment is consistent with our strategy of acquiring royalties on innovative therapies in areas of high unmet patient need," said Pablo Legorreta, founder and chief executive officer of Royalty Pharma. "SPINRAZA has transformed the lives of thousands of SMA patients. We are also excited to acquire a royalty on pelacarsen which, if approved, has the potential to be a practice-changing, first-in-class therapy benefiting millions of cardiovascular disease patients by lowering Lp(a)."

Under the terms of the monetization transaction, Royalty Pharma will receive:

- 25% of Ionis' SPINRAZA royalty payments through 2027, increasing to 45% of royalty payments in 2028, on up to $1.5 billion in annual sales. Royalty Pharma's royalty interest in SPINRAZA will revert to Ionis after total SPINRAZA royalty payments reach either $475 million or $550 million, depending on the timing and occurrence of certain events; and
- 25% of Ionis' pelacarsen royalty payments.

Under the terms of Ionis' exclusive licensing agreement with Biogen, Ionis is entitled to tiered royalties up to the mid-teens on annual worldwide net sales of SPINRAZA. Ionis' exclusive license agreement with Novartis entitles Ionis to receive tiered royalties in the mid-teens to low 20% range on net sales of pelacarsen. Ionis also retains all rights to $650 million in pelacarsen development, regulatory and commercial milestones from Novartis.

Additional information regarding the monetization agreement is available in a Current Report on Form 8-K Ionis filed today with the U.S. Securities and Exchange Commission.

Advisors

Cowen acted as financial advisor to Ionis and Cooley acted as its legal advisor. Goodwin Procter, Fenwick & West and Maiwald acted as legal advisors to Royalty Pharma.

About SPINRAZA® (nusinersen)

SPINRAZA is the first approved therapy for the treatment of spinal muscular atrophy (SMA) and remains the global market leader and foundation of care for patients of all ages living with the disease. To date, more than 13,000 SMA patients have been treated with SPINRAZA worldwide. The SPINRAZA clinical development program encompasses 10 clinical studies, which have included more than 300 individuals across a broad spectrum of patient populations including two randomized controlled studies (ENDEAR and CHERISH). The ongoing SHINE and NURTURE open-label extension studies are evaluating the long-term impact of SPINRAZA. The most common adverse events observed in clinical studies were respiratory infection, fever, constipation, headache, vomiting and back pain. Laboratory tests can monitor for renal toxicity and coagulation abnormalities, including acute severe low platelet counts, which have been observed after administration of some ASOs.

Biogen licensed the global rights to develop, manufacture and commercialize SPINRAZA from Ionis Pharmaceuticals, Inc. (Nasdaq: IONS), the leader in RNA-targeted therapeutics. Please click here for Important Safety Information and full Prescribing Information for SPINRAZA in the U.S., or visit your respective country's product website.

About Pelacarsen

Pelacarsen, licensed by Novartis for exclusive worldwide development, manufacturing and commercialization, is an investigational antisense medicine designed to reduce apolipoprotein(a) production in the liver to offer a direct approach for reducing circulating lipoprotein(a), or Lp(a), an atherogenic,

pro-inflammatory and thrombogenic lipoprotein that induces additional cardiovascular risk independent of other cardiovascular risk factors.

About Ionis Pharmaceuticals, Inc.

For more than 30 years, Ionis has been the leader in RNA-targeted therapy, pioneering new markets and changing standards of care with its novel antisense technology. Ionis currently has three marketed medicines and a premier late-stage pipeline highlighted by industry-leading cardiovascular and neurological franchises. Our scientific innovation began and continues with the knowledge that sick people depend on us, which fuels our vision to become the leader in genetic medicine, utilizing a multi-platform approach to discover, develop and deliver life-transforming therapies.

To learn more about Ionis visit www.ionispharma.com and follow us on Twitter @ionispharma.

About Royalty Pharma plc

Founded in 1996, Royalty Pharma is the largest buyer of biopharmaceutical royalties and a leading funder of innovation across the biopharmaceutical industry, collaborating with innovators from academic institutions, research hospitals and non-profits through small and mid-cap biotechnology companies to leading global pharmaceutical companies. Royalty Pharma has assembled a portfolio of royalties which entitles it to payments based directly on the top-line sales of many of the industry's leading therapies. Royalty Pharma funds innovation in the biopharmaceutical industry both directly and indirectly - directly when it partners with companies to co-fund late-stage clinical trials and new product launches in exchange for future royalties, and indirectly when it acquires existing royalties from the original innovators. Royalty Pharma's current portfolio includes royalties on more than 35 commercial products, including Vertex's Trikafta, Kalydeco, Orkambi and Symdeko, Biogen's Tysabri, AbbVie and Johnson & Johnson's Imbruvica, Astellas and Pfizer's Xtandi, GSK's Trelegy, Novartis' Promacta, Biohaven and Pfizer's Nurtec ODT, Johnson & Johnson's Tremfya, Roche's Evrysdi, Gilead's Trodelvy, and 12 development-stage product candidates.

Ionis' Forward-looking Statements

This press release includes forward-looking statements regarding Ionis' transaction with Royalty Pharma, Ionis' business and the therapeutic and commercial potential of Ionis' technologies, SPINRAZA, pelacarsen and other products in development. 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 related to the impact COVID-19 could have on our business, and including but not limited to, those related to our commercial products and the medicines in our pipeline, and particularly 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. 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 Dec. 31, 2021, and the most recent Form 10-Q quarterly filing, 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" refers to Ionis Pharmaceuticals and its subsidiaries.

Royalty Pharma Forward-looking Statements

The information set forth herein does not purport to be complete or to contain all of the information you may desire. Statements contained herein are made as of the date of this document unless stated otherwise, and neither the delivery of this document at any time, nor any sale of securities, shall under any circumstances create an implication that the information contained herein is correct as of any time after such date or that information will be updated or revised to reflect information that subsequently becomes available or changes occurring after the date hereof.

This document contains statements that constitute "forward-looking statements" as that term is defined in the United States Private Securities Litigation Reform Act of 1995, including statements that express the company's opinions, expectations, beliefs, plans, objectives, assumptions or projections regarding future events or future results, in contrast with statements that reflect historical facts. Examples include discussion of Royalty Pharma's strategies, financing plans, growth opportunities and market growth. In some cases, you can identify such forward-looking statements by terminology such as "anticipate," "intend," "believe," "estimate," "plan," "seek," "project," "expect," "may," "will," "would," "could" or "should," the negative of these terms or similar expressions. Forward-looking statements are based on management's current beliefs and assumptions and on information currently available to the company. However, these forward-looking statements are not a guarantee of Royalty Pharma's performance, and you should not place undue reliance on such statements. Forward-looking statements are subject to many risks, uncertainties and other variable circumstances, and other factors. Such risks and uncertainties may cause the statements to be inaccurate and readers are cautioned not to place undue reliance on such statements. Many of these risks are outside of the company's control and could cause its actual results to differ materially from those it thought would occur. The forward-looking statements included in this document are made only as of the date hereof. The company does not undertake, and specifically declines, any obligation to update any such statements or to publicly announce the results of any revisions to any such statements to reflect future events or developments, except as required by law.

Certain information contained in this document relates to or is based on studies, publications, surveys and other data obtained from third-party sources and the company's own internal estimates and research. While the company believes these third-party sources to be reliable as of the date of this document, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, all of the market data included in this document involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. Finally, while the company believes its own internal research is reliable, such research has not been verified by any independent source.

For further information, please reference Royalty Pharma's reports and documents filed with the U.S. Securities and Exchange Commission ("SEC") by visiting EDGAR on the SEC's website at www.sec.gov.

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