



## **Ionis Pharmaceuticals Significantly Improves upon 2016 Financial Guidance**

*Strong financial performance resulting from the continued success of pipeline programs*

**Carlsbad, Calif., January 6, 2017** – Ionis Pharmaceuticals, Inc. (NASDAQ: IONS) announced today that the Company expects to significantly improve upon its 2016 financial guidance. Ionis expects to end 2016 with pro forma net operating income in the low to mid \$20 million range and more than \$650 million in cash. The Company's significantly improved financial guidance is the result of numerous accomplishments across all areas of its business, most notably the recent approval of SPINRAZA for the treatment of spinal muscular atrophy in pediatric and adult patients.

"2016 was marked by major regulatory and development achievements with SPINRAZA and the continued success in advancing our pipeline of drugs to treat both rare and more prevalent diseases across multiple therapeutic areas. In 2016, we generated more than \$340 million in revenue, including more than \$150 million in the fourth quarter," said Elizabeth L. Hougen, chief financial officer at Ionis Pharmaceuticals. "As a result of our business accomplishments, we expect to end 2016 with pro forma net operating income in the low to mid \$20 million range, a significant improvement over our original guidance of a pro forma net operating loss in the low \$60 million range. In 2016, we received \$280 million from our partners to end the year with more than \$650 million in cash, substantially exceeding our year-end cash guidance by more than \$50 million. We believe our strong financial position will enable us to continue to execute on our corporate goals throughout 2017. Importantly, we look forward to adding commercial revenue from SPINRAZA to our existing base of partner revenue this year."

"The U.S. approval of SPINRAZA is truly a landmark event for infants, children and adults with spinal muscular atrophy and their families, and we look forward to the therapeutic benefit SPINRAZA can provide to patients with this devastating disease," said B. Lynne Parshall, chief operating officer at Ionis Pharmaceuticals. "Looking ahead, we expect 2017 to be a transformational year with two Phase 3 studies completing, and the addition of commercial revenues from SPINRAZA. We and Akcea plan to report pivotal data from the Phase 3 APPROACH study evaluating volanesorsen in patients with familial chylomicronemia syndrome in the first quarter of 2017. Akcea is gearing up to rapidly complete regulatory submissions for volanesorsen in the U.S., E.U., and Canada upon positive data and is poised for the launch of its first commercial drug. In the second quarter of 2017, we and our partner GSK look forward to announcing Phase 3 results from the NEURO-TTR study with IONIS-TTR<sub>Rx</sub> in patients with familial amyloid polyneuropathy. We and GSK are well along in preparing for the launch of IONIS-TTR<sub>Rx</sub>."

### **ABOUT IONIS PHARMACEUTICALS, INC.**

Ionis is the leading company in RNA-targeted drug discovery and development focused on developing drugs for patients who have the highest unmet medical needs, such as those patients with severe and rare diseases. Using its proprietary antisense technology, Ionis has created a large pipeline of first-in-class or best-in-class drugs, with over three dozen drugs in development. SPINRAZA™ (nusinersen) is a drug that has been approved in the U.S. for the treatment of spinal muscular atrophy (SMA) in pediatric and adult patients. Biogen is responsible for commercialization of SPINRAZA. Drugs currently in Phase 3 development include volanesorsen, a drug Ionis is developing and plans to commercialize through its wholly owned subsidiary, Akcea Therapeutics, to treat patients with either familial

chylomicronemia syndrome or familial partial lipodystrophy; and IONIS-TTR<sub>Rx</sub>, a drug Ionis is developing with GSK to treat patients with TTR amyloidosis. Ionis' patents provide strong and extensive protection for its drugs and technology. Additional information about Ionis is available at [www.ionispharma.com](http://www.ionispharma.com).

#### **IONIS' FORWARD-LOOKING STATEMENT**

This press release includes forward-looking statements regarding Ionis' business, financial guidance and the therapeutic and commercial potential of Ionis' technologies and products in development. Any statement describing Ionis' goals, expectations, financial or other projections, intentions or beliefs, including the commercial potential of SPINRAZA, IONIS-TTR<sub>Rx</sub>, volanesorsen and other of Ionis' drugs in development is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those inherent in the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such drugs. 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 December 31, 2015, and its most recent quarterly report on Form 10-Q, which are on file with the SEC. 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.

Ionis Pharmaceuticals™ is a trademark of Ionis Pharmaceuticals, Inc. Akcea Therapeutics™ is a trademark of Ionis Pharmaceuticals, Inc. SPINRAZA™ is a trademark of Biogen.

#### **Ionis Pharmaceuticals Investor and Media Contact:**

D. Wade Walke, Ph.D.

Vice President, Corporate Communications and Investor Relations

760-603-2741

###