

Ionis Announces the Appointment of Two New Board Members

September 24, 2018

CARLSBAD, Calif., Sept. 24, 2018 /PRNewswire/ -- Ionis Pharmaceuticals, Inc. (NASDAQ: IONS), the leader in antisense therapeutics, today announced the appointment of two new members to its Board of Directors effective immediately – Dr. Michael Hayden, Killam Professor at the University of British Columbia and the Director of the Translational Laboratory in Genetic Medicine, and Peter N. Reikes, Vice Chairman, Investment Banking Division, Stifel, Nicolaus & Company, Inc.



"On behalf of Ionis and the Board of Directors, I am pleased to welcome Dr. Hayden and Mr. Reikes to the Board. Peter Reikes brings decades of financial experience and a deep understanding of Wall Street. Dr. Michael Hayden brings a brilliant scientific career complemented by extensive experience leading research and development at a large pharmaceutical company," said Stanley T. Crooke, M.D., Ph.D., Ionis Founder, CEO, and Chairman of the Board. "We are confident that their leadership and new perspectives combined with the experience and commitment of our Board will have a meaningful impact in our efforts to bring benefit to patients in need and in doing so, return value to our shareholders. We look forward to their contributions."

With the appointments of Dr. Hayden and Mr. Reikes the Ionis Board of Directors increases to 10 members.

About Michael Hayden, CM OBC MB ChB PhD FRCP(C) FRSC

Dr. Michael Hayden is a Killam Professor at the University of British Columbia and the Director of the Translational Laboratory in Genetic Medicine at the National University of Singapore and the Agency for Science, Technology and Research (A*STAR). From 2012 to 2017, he served as the President of Global R&D and Chief Scientific Officer at Teva Pharmaceutical Industries Ltd. Dr. Hayden built and transformed research and development at Teva to become a highly productive research engine and was instrumental in the approval of approximately 30 new products.

Dr. Hayden has founded three biotechnology companies and has been the recipient of numerous prestigious honors and awards including being inducted into the Canadian Medical Hall of Fame, receiving the July 2012 Diamond Jubilee Medal, on behalf of HRH Queen Elisabeth II and the Margolese National Brain Disorder Prize, awarded to Canadians who have made outstanding contributions to the treatment, amelioration, or cure of brain diseases. He's also received the Canada Gairdner Wightman award for his outstanding leadership in medicine and medical science as a physician-scientist. Dr. Hayden was awarded the Order of Canada, the Order of British Columbia, named Canada's Health Researcher of the Year by Canadian Institutes of Health Research, and has received the Prix Galien for his contribution to Canadian pharmaceutical research. Most recently, Dr. Hayden was named one of the 50 Canadians born in the 20th century who have changed the world.

About Peter N. Reikes

Peter N. Reikes is a Vice Chairman in the Investment Banking Division at Stifel, Nicolaus & Company, Incorporated, which he joined in late 2010. Over the course of his more than 30-year career in investment banking, Mr. Reikes has completed a wide range of financing and merger and acquisition transactions for companies in the life sciences, medical technology, and healthcare services sectors. Prior to joining Stifel, Nicolaus, he spent eleven years at Cowen and Company, LLC, where he was Vice Chairman and Head of Healthcare Investment Banking, and over fourteen years at PaineWebber Incorporated, where he was a Managing Director and Head of Healthcare Investment Banking and began his career in 1985.

Mr. Reikes is a former director of Ricerca Biosciences, LLC, Biocompatibles, Ltd., and the affiliated partnership boards of Alkermes, Inc., Cephalon, Inc., Gensia, Inc., Genzyme Corporation, and Repligen Corporation, as well as the Institute for Quality Improvement of the Accreditation Association for Ambulatory Health Care. Mr. Reikes also is a director of the Heart & Soul Foundation, an organization which supports a range of community service programs in the greater New York City area. Mr. Reikes received his B.A. in Economics from the University of California at Los Angeles and his M.B.A. in Finance from The Wharton School at the University of Pennsylvania.

ABOUT IONIS PHARMACEUTICALS

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 40 drugs in development. SPINRAZA[®] (nusinersen) has been approved in global markets for the treatment of spinal muscular atrophy (SMA). Biogen is responsible for commercializing SPINRAZA. TEGSEDI[™] (inotersen) and WAYLIVRA[™] (volanesorsen) are two antisense drugs that Ionis discovered and successfully advanced through Phase 3 studies. TEGSEDI is approved in the E.U. for the treatment of stage 1 or stage 2 polyneuropathy in adult patients with hereditary transthyretin amyloidosis, or hATTR, and is currently under regulatory review in the U.S. and Canada. WAYLIVRA is also under regulatory review for marketing approval for the treatment of patients with familial chylomicronemia syndrome, or FCS. WAYLIVRA is also in a Phase 3 study in patients with familial partial lipodystrophy, or FPL. Akcea Therapeutics, an affiliate of Ionis focused on developing and commercializing drugs to treat patients with serious and rare diseases, will commercialize TEGSEDI and WAYLIVRA, if approved. Ionis' patents provide strong and extensive protection for its drugs and technology. Additional information about Ionis is available at www.ionispharma.com.

IONIS' FORWARD-LOOKING STATEMENT

This press release includes forward-looking statements regarding the therapeutic and commercial potential of Ionis' technologies and products in development, including SPINRAZA[®], TEGSEDI[™] (inotersen) and WAYLIVRA[™] (volanesorsen). 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, 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, 2017, and most recent Form 10-Q quarterly filing, which are on file with the SEC. Copies of this 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 Akcea Therapeutics, Inc. TEGSEDI™ is a trademark of Akcea Therapeutics, Inc. WAYLIVRA™ is a trademark of Akcea Therapeutics, Inc. SPINRAZA® is a registered trademark of Biogen.

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