SUNFISH Pivotal Results for Risdiplam (RG7916) Demonstrate Medically Meaningful Benefit in Broadest Age Group of Patients Studied with Type 2 and 3 Spinal Muscular Atrophy

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- Statistically significant results in primary and key secondary endpoints -
- Risdiplam is the first SMA treatment to have positive placebo-controlled data in pivotal studies across a real world population of infants, children, teenagers and adults -
- Investor call at 8am ET -

SOUTH PLAINFIELD, N.J., Feb. 6, 2020 /PRNewswire/ -- PTC Therapeutics, Inc. (NASDAQ: PTCT) today announced that positive 1 year clinical data from Part 2 of the pivotal SUNFISH study evaluating risdiplam in people aged 2-25 years with nonambulatory type 2 and type 3 spinal muscular atrophy (SMA) were presented at the 2nd International SMA Europe Conference. The study demonstrated that the change from baseline in the primary endpoint Motor Function Measure scale (MFM-32) was significantly greater in patients receiving risdiplam compared to placebo (1.55 point mean difference; p=0.0156) at 12 months of treatment. As expected, the age-related effect was notable and consistent with SMA disease progression, with younger patients (2-5 years) (78.1% vs 52.9% achieving ≥3 point increase) showing clear improvement relative to placebo while older patients demonstrated disease stabilization and, in some cases, improvement. Safety for risdiplam was consistent with its known safety profile and no new safety signals were identified.

"The results of this ambitious study confirm risdiplam's potential to be the most competitive global product for a broad range of SMA patients," said Stuart W. Peltz, Ph.D., Chief Executive Officer of PTC Therapeutics. "Current approved treatments only address a portion of SMA patients. This was the first clinical study encompassing SMA patients representative of the population that are seen in clinical practice. Together with the positive data from the FIREFISH study in type 1 patients, these data exemplify the potential of risdiplam for all SMA patients."

SUNFISH is a two-part, double-blind, placebo-controlled, pivotal study in people aged 2-25 years (n=180) with type 2 and 3 SMA, with broad inclusion criteria. The majority of patients in the study were older, had more progressed disease as evidenced by severe scoliosis and contractures, and had lower baseline scores on motor function scales relative to other clinical trials in this patient population. The primary endpoint for Part 2 was change at 12 months in motor function as measured by the MFM-32 scale compared to placebo. The MFM-32 scale is a highly sensitive, validated measure used to evaluate fine and gross motor function and is a more relevant measure for patients who have more progressed disease.

- The pivotal, Part 2 component of the study met its primary endpoint (cut-off date: Sep 6, 2019). Total mean change from baseline in the MFM-32 score was significantly greater in patients receiving risdiplam compared to those treated with placebo at 12 months (p=0.0156).
    - The strongest responses in MFM-32 compared to placebo were observed in the youngest age group (2-5 years) (78.1% vs 52.9% achieving ≥3 point increase) as expected.
    - Stabilization, which is the goal of treatment in the older age group (18-25 years) with more established disease, was achieved versus placebo (57.1% vs 37.5%, with stabilization defined as a ≥0 point increase).
- Medically meaningful and statistically significant results were demonstrated in key secondary endpoints.
    - Revised Upper Limb Module (RULM) mean change from baseline was significantly greater in patients receiving risdiplam compared with placebo (1.59 point difference; p=0.0028).
    - In the Hammersmith Functional Motor Scale Expanded (HFMSE) there was a numerical difference in favor of risdiplam which did not reach statistical significance (p=0.3015).
    - Patients and caregivers also reported numerical improvements in independence as measured by the SMA Independence Scale, a new measurement that captures highly relevant, day-to-day activities such as eating and drinking, getting dressed, and overall hygiene, amongst many other daily activities. Patients and caregivers reported improvements in independence after treatment with risdiplam over 12 months (Caregiver (for all patients), p=0.0022; Patients (≥12 years), p=0.1778).
- More than 400 patients have been treated with risdiplam across all studies to date, with no treatment-related safety findings leading to study withdrawal in any risdiplam trial. The adverse event profile was similar to placebo. The most common adverse events were upper respiratory tract infection (31.7%), nasopharyngitis (25.8%), pyrexia (20.8%), headache (20%), diarrhea (16.7%), vomiting (14.2%) and cough (14.2%). While the rate of lower respiratory tract infections overall was similar in both treatment arms (RIS 19%, PLB 20 %), serious lower respiratory tract infections occurred in more patients in the risdiplam group (RIS 10%, PLB 2%) but were reported as unrelated to risdiplam and resolved without change to study treatment.

Risdiplam (RG7916), is an investigational, oral, first-in-class, mRNA splicing modifier for the treatment of SMA. Recently, positive results from the pivotal single-arm FIREFISH Part 2 study, which assessed the efficacy of risdiplam in 41 infants (eligible age at enrollment between 1 and 7 months) with type 1 SMA treated for 12 months, were announced. The SMA program is a collaboration between PTC, the SMA Foundation, and Roche.

In November 2019, the U.S. Food and Drug Administration (FDA) accepted a New Drug Application (NDA) and granted Priority Review for risdiplam.

The NDA filing was based on 12-month data from the dose-finding, Part 1 of the pivotal FIREFISH and SUNFISH studies, and preclinical pharmacokinetic and clinical and pharmacodynamic data in all types of SMA. The Prescription Drug User Fee Act (PDUFA) goal date for a decision by the FDA is May 24, 2020.

Conference Call:
The 8:00 am ET conference call highlighting data on risdiplam in type 2/3 spinal muscular atrophy patients from Part 2 of the SUNFISH trial presented at the 2nd International Scientific Congress on Spinal Muscular Atrophy, can be accessed by dialing (877) 303-9216 (domestic) or (973) 935-8152 (international) five minutes prior to the start of the call and providing the passcode 7757508. PTC management will be joined on the call by Dr. Basil Darras, Associate Neurologist in-Chief and Director of the Spinal Muscular Atrophy Clinical Research Program at Boston Children's Hospital.

A live, listen-only webcast of the conference call can be accessed on the investor relations section of the PTC website at www.ptcbio.com. A webcast replay of the call will be available approximately two hours after completion of the call and will be archived on the company's website for 30 days following the call. It is recommended that users connect to PTC's website several minutes prior to the start of the webcast to ensure a timely connection. PTC's current Investor Presentation is available at the same website location.

About Spinal Muscular Atrophy (SMA)
Spinal muscular atrophy (SMA) is a severe, inherited, progressive neuromuscular disease that causes devastating muscle atrophy and disease-related complications. It is the most common genetic cause of infant mortality and one of the most common rare diseases, affecting approximately one in 11,000 babies. SMA leads to the progressive loss of nerve cells in the spinal cord that control muscle movement. Depending on the type of SMA, an individual's physical strength and their ability to walk, eat or breathe can be significantly diminished or lost.

SMA is caused by a mutation in the survival motor neuron 1 (SMN1) gene that results in a deficiency of SMN protein. SMN protein is found throughout the body and increasing evidence suggests SMA is a multi-system disorder and the loss of SMN protein may affect many tissues and cells, which can stop the body from functioning.

About risdiplam
Risdiplam is an investigational survival motor neuron2 (SMN2) splicing modifier for SMA and is an orally administered liquid. It is designed to durably increase and sustain SMN protein levels both throughout the central nervous system and in peripheral tissues of the body. Risdiplam is being studied in a broad clinical trial program in SMA, with patients ranging from birth to 60 years old, and includes patients previously treated with other SMA-targeting therapies. The clinical trial population represents the broad, real-world spectrum of people living with this disease. The risdiplam clinical development program was designed with the aim of enabling access for all appropriate patients.

Risdiplam is currently being evaluated in four multicenter trials in people with SMA:

- SUNFISH (NCT02908685) – SUNFISH is a two-part, double-blind, placebo-controlled pivotal study in people aged 2-25 years with types 2 or 3 SMA. Part 1 (n=51) determined the dose for the confirmatory Part 2. Part 2 (n=180) evaluated motor function using total score of Motor Function Measure 32 (MFM-32) at 12 months. MFM-32 is a validated scale used to evaluate fine and gross motor function in people with neurological disorders, including SMA.
- FIREFISH (NCT02913482) – an open-label, two-part pivotal clinical trial in infants with type 1 SMA. Part 1 was a dose-escalation study in 21 infants. The primary objective of Part 1 was to assess the safety profile of risdiplam in infants and determine the dose for Part 2. Part 2 is a pivotal, single-arm study of risdiplam in 41 infants with type 1 SMA treated for 24 months, followed by an open-label extension. Enrollment for Part 2 was completed in November 2018. The primary objective of Part 2 is to assess efficacy as measured by the proportion of infants sitting without support after 12 months of treatment, as assessed in the Gross Motor Scale of the Bayley Scales of Infant and Toddler Development – Third Edition (BSID-III) (defined as sitting without support for 5 seconds).
- JEWELFISH (NCT03032172) – an open-label exploratory trial in people with SMA aged 6 months–60 years who have been previously treated with SMA-directed therapies. The study has completed recruitment.
- RAINBOWFISH (NCT03779334) – an open-label, single-arm, multicenter study, investigating the efficacy, safety, pharmacokinetics and pharmacodynamics of risdiplam in babies (~n=25), from birth to six weeks of age (at first dose) with genetically diagnosed SMA who are not yet presenting with symptoms. The study is currently recruiting.

About PTC Therapeutics, Inc.
PTC is a science-driven, global biopharmaceutical company focused on the discovery, development and commercialization of clinically differentiated medicines that provide benefits to patients with rare disorders. PTC's ability to globally commercialize products is the foundation that drives investment in a robust and diversified pipeline of transformative medicines and our mission to provide access to best-in-class treatments for patients who have an unmet medical need.

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Forward-Looking Statements:
This press release contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. All statements

contained in this release, other than statements of historic fact, are forward-looking statements, including statements regarding: the future expectations, plans and prospects for PTC; advancement of PTC's joint collaboration program in SMA, including any potential regulatory submissions, regulatory approvals or commercial prospects; PTC's strategy, future operations, future financial position, future revenues, projected costs; and the objectives of management. Other forward-looking statements may be identified by the words "guidance", "plan," "anticipate," "believe," "estimate," "expect," "intend," "may," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions.

PTC's actual results, performance or achievements could differ materially from those expressed or implied by forward-looking statements it makes as a result of a variety of risks and uncertainties, including those related to: the enrollment, conduct, and results of studies under the SMA collaboration and events during, or as a result of, the studies that could delay or prevent further development under the program, including any potential regulatory submissions and potential commercialization with regards to risdiplam; the eligible patient base and commercial potential of risdiplam or any of PTC's other product candidates; and the factors discussed in the "Risk Factors" section of PTC's most recent Annual Report on Form 10-K, as well as any updates to these risk factors filed from time to time in PTC's other filings with the SEC. You are urged to carefully consider all such factors.

As with any pharmaceutical under development, there are significant risks in the development, regulatory approval and commercialization of new products. There are no guarantees that any product will receive or maintain regulatory approval in any territory, or prove to be commercially successful, including risdiplam.

The forward-looking statements contained herein represent PTC's views only as of the date of this press release and PTC does not undertake or plan to update or revise any such forward-looking statements to reflect actual results or changes in plans, prospects, assumptions, estimates or projections, or other circumstances occurring after the date of this press release except as required by law.

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