# Two-Year Data of Evrysdi™ (risdiplam) in Infants with Spinal Muscular Atrophy Demonstrate Continued Improvement of Developmental Milestones

September 28, 2020

**- Patients in Part 1 of the FIREFISH study demonstrated gains in motor milestones between months 12 and 24 -**

**- Strong Evrysdi™ launch following approval with broad label -**

SOUTH PLAINFIELD, N.J., Sept. 28, 2020 /PRNewswire/ -- PTC Therapeutics, Inc. (NASDAQ: PTCT) today announced that two-year data from Part 1 of the FIREFISH study demonstrated that infants on Evrysdi™ (risdiplam) continued to improve and achieve motor milestones. Evrysdi™ was approved in August for the treatment of spinal muscular atrophy (SMA) patients two months and older. Data were presented at the 25th International Annual Congress of the World Muscle Society (WMS).

"The results from the long-term FIREFISH trial demonstrate that SMA patients continue to improve in motor function and gain additional developmental milestones," said Stuart W. Peltz, Ph.D., Chief Executive Officer, PTC Therapeutics. "In addition, the results further validate the safety and durable efficacy profile of Evrysdi™ and reinforce the continued benefit of the therapy. Since its approval in August, Evrysdi™ has demonstrated a strong commercial launch signifying the need for an oral treatment for SMA patients, especially one that can be taken at home amidst the global pandemic."

The results from the second year of Part 1 of the FIREFISH study demonstrated that infants treated with the therapeutic dose of risdiplam (17 out of 21 babies) showed that an estimated 88 percent of infants were alive and required no permanent ventilation at two years. In addition, infants reached the following milestones:

| Milestone | 1 year | 2 years |
|---|---|---|
| **Sit without support for at least 5 seconds** *(as measured by the Gross Motor Scale of the Bayley Scales of Infant and Toddler Development – Third edition (BSID-III)* | 41% (7/17) | **59% (10/17)** |
| **Upright head control** | 53% (9/17) | **65% (11/17)** |
| **Ability to turn over** | 12% (2/17) | **29% (5/17)** |
| **Stand supporting weight or with support** | 6% (1/17) | **30% (5/17)** |
| **CHOP-INTEND* score of 40 points or more** | 59% (10/17) | **71% (12/17)** |
| Safety for Evrysdi in the FIREFISH study was consistent with its previously reported safety profile and no new safety signals were identified. The most common adverse events (n=21) included fever (pyrexia; 71%), upper respiratory tract infection (52%), cough (33%), vomiting (33%), diarrhea (29%) and respiratory tract infection (29%). The most serious adverse event that occurred in 24% of infants was pneumonia. | | |

Evrysdi™ has demonstrated a favorable efficacy and safety profile, with the safety profile established across the FIREFISH and SUNFISH trials. To date, there have been no drug-related safety findings leading to withdrawal from any study.

At the time of the analysis, the youngest infant was 28.4 months and the oldest was 45.1 months old. The median age at enrollment was 6.3 months. Of the infants alive at two years (n=14), 100 percent maintained the ability to swallow and 93 percent (13/14) were able to feed orally. Of the 17 infants treated with the therapeutic dose, two experienced fatal complications of their disease at eight and 13 months of treatment and one infant was withdrawn from the study and sadly died 3.5 months later. None of these were attributed by the investigator as related to risdiplam.

Evrysdi™ (risdiplam) is being studied in more than 450 people as part of a broad and robust clinical trial program in SMA, with patients ranging from birth to 60 years old, and including pre-symptomatic patients and those previously treated with other SMA-targeting therapies.

Evrysdi™ is designed to treat SMA by increasing and sustaining the production of the survival of motor neuron (SMN) protein. SMN protein is found throughout the body and is critical for maintaining healthy motor neurons and movement. Roche leads the clinical development of Evrysdi as part of a collaboration with the SMA Foundation and PTC Therapeutics. Evrysdi is marketed in the United States by Genentech, a member of the Roche Group.

*Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders

**About Evrysdi™ (risdiplam)**

Evrysdi™ is a survival of motor neuron 2 (SMN2) splicing modifier designed to treat SMA caused by mutations in chromosome 5q

that lead to SMN protein deficiency. Evrysdi™ is administered daily at home in liquid form by mouth or by feeding tube.

The FDA approved Evrysdi for the treatment of SMA in adults and children 2 months of age and older. Risdiplam was granted PRIME (PRIority MEdicines) designation by the European Medicines Agency (EMA) in 2018 and Orphan Drug Designation by FDA and EMA in 2017 and 2019, respectively. At this time, Evrysdi™ has been filed in 16 markets:Australia, Brazil, Chile, India, Indonesia, Israel, Kuwait, Macedonia, Malaysia, Russia, Singapore, South Korea, Taiwan, Thailand, Ukraine, and the United Arab Emirates. In addition, four health authorities are currently reviewing the application: Canada, China, EU (European Union) and Switzerland.

**About the Clinical Studies**

Risdiplam is currently being evaluated in four multi-center trials in people with 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 with the primary objective of assessing the safety profile of risdiplam in infants and determining the dose for Part 2. Part 2 is a pivotal, single-arm study of risdiplam in 41 infants with Type 1 SMA treated for two years followed by an open-label extension. Enrollment for Part 2 was completed in November 2018. The primary objective of Part 2 was 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 five seconds). The study met its primary endpoint.
- **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. The study met its primary endpoint.
- **JEWELFISH (NCT03032172)** - an open-label exploratory trial designed to assess the safety, tolerability, pharmacokinetics (PK) and pharmacodynamics (PD) in people with SMA aged 6 months to 60 years who received other investigational or approved SMA therapies for at least 90 days prior to receiving Evrysdi™. The study has completed recruitment (n=174).
- **RAINBOWFISH (NCT03779334)** - an open-label, single-arm, multi-center study, investigating the efficacy, safety, pharmacokinetics, and pharmacodynamics of risdiplam in babies (~n=25), from birth to 6 weeks of age (at first dose), with genetically diagnosed SMA, who are not yet presenting with symptoms. The study is currently recruiting.

**Clinical Trial Safety Data**
The safety profile of Evrysdi™ was established across FIREFISH and SUNFISH pivotal trials. The most common adverse reactions in later-onset SMA (incidence of at least 10 percent of patients treated with Evrysdi™ and more frequently than control) were fever, diarrhea, and rash. The most common adverse reactions in infantile-onset SMA were similar to those observed in later-onset SMA patients. Additionally, the most common adverse reactions (incidence of at least 10 percent) were upper respiratory tract infection, pneumonia, constipation, and vomiting.

**About Spinal Muscular Atrophy (SMA)**
Spinal muscular atrophy (SMA) is a severe, progressive neuromuscular disease that can be fatal. It affects approximately one in 10,000 babies and is the leading genetic cause of infant mortality. SMA is caused by a mutation of the survival motor neuron 1 (SMN1) gene, which leads to a deficiency of SMN protein. This protein is found throughout the body and is essential to the function of nerves that control muscles and movement. Without it, nerve cells cannot function correctly, leading to muscle weakness over time. 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.

**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. To learn more about PTC, please visit us at www.ptcbio.com and follow us on Facebook, on Twitter at @PTCBio, and on LinkedIn.

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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 historical 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 and, 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 outcome of pricing, coverage and reimbursement negotiations with third party payors for PTC's products or product candidates that PTC commercializes or may commercialize in the future, including Evrysdi™; 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 Evrysdi™; the eligible patient base and commercial potential of Evrysdi™ or any of PTC's other product candidates; and the factors discussed in the "Risk Factors" section of PTC's most recent Quarterly Report on Form 10-Q and 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 (Securities and Exchange Commission). 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 or product candidate will receive or maintain regulatory approval in any territory, or prove to be commercially successful, including Evrysdi™.

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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