### **PTC FY2018**

Earnings call, February 28, 2019 Stuart Peltz, CEO Marcio Souza, COO Christine Utter, Principal Financial Officer

PTC

### **Forward looking statement**

This presentation contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. All statements contained in this presentation, other than statements of historic fact, are forward-looking statements, including statements with respect to 2019 net product revenue guidance and future potential revenues and statements regarding: the future expectations, plans and prospects for PTC; expectations with respect to PTC's gene therapy platform, including any potential regulatory submissions; PTC's expectations with respect to the licensing and potential commercialization of TEGSEDI and Waylivra; expansion of commercialization of Translarna and Emflaza; advancement of PTC's joint collaboration program in SMA, including any potential regulatory submissions; 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," "continue," "vision," "project," and similar expressions.

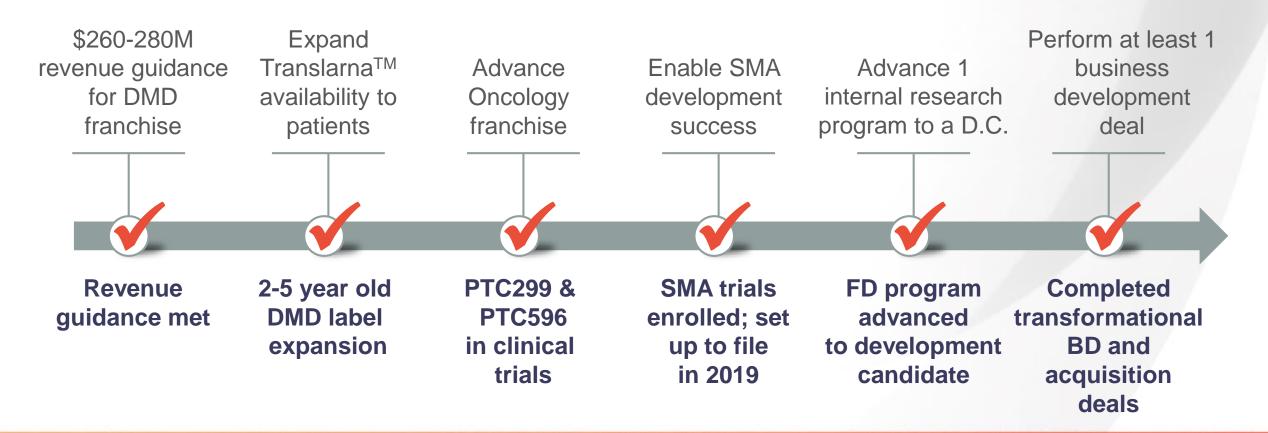
PTC's actual results, performance or achievements could differ materially from those expressed or implied by forward-looking statements it makes as a result of a variety of risks and uncertainties. including those related to: the outcome of pricing, coverage and reimbursement negotiations with third party payors for Emflaza and Translarna and any other product candidates that PTC may commercialize in the future; whether, and to what extent, third party payors impose additional requirements before approving Emflaza prescription reimbursement; PTC's ability to complete a dystrophin study necessary to support a re-submission of its Translarna NDA for the treatment of nonsense mutation Duchenne muscular dystrophy (nmDMD) to the FDA, and PTC's ability to perform any necessary additional clinical trials, non-clinical studies, and CMC assessments or analyses at significant cost; PTC's ability to maintain its marketing authorization of Translarna for the treatment of nmDMD in the European Economic Area (EEA), including whether the European Medicines Agency (EMA) determines in future annual renewal cycles that the benefit-risk balance of Translarna authorization supports renewal of such authorization; PTC's ability to enroll, fund, complete and timely submit to the EMA the results of Study 041, a randomized, 18-month, placebo-controlled clinical trial of Translarna for the treatment of nmDMD followed by an 18-month open-label extension, which is a specific obligation to continued marketing authorization in the EEA; expectations with respect to the potential financial impact or PTC's ability to realize the anticipated benefits of the acquisition of Agilis and its gene therapy platform, including with respect to the business of Agilis and expectations with respect to the potential achievement of development, regulatory and sales milestones and contingent payments to the former Agilis equityholders with respect thereto and PTC's ability to obtain marketing approval of PTC-AADC and other product candidates acquired from Agilis, will not be realized or will not be realized within the expected time period; expectations with respect to the potential financial impact and benefits of the collaboration and licensing agreement with Akcea Therapeutics, Inc., including with respect to the timing of regulatory approval of TEGSEDI and Waylivra in countries in Latin America and the Caribbean, the commercialization of TEGSEDI and Waylivra, and PTC's expectations with respect to contingent payments to Akcea based on net sales and the potential achievement of regulatory milestones; 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 with regards to risdiplam; significant transaction costs, unknown liabilities, the risk of litigation and/or regulatory actions related to the acquisition of its gene therapy pipeline, as well as other business effects, including the effects of industry, market, economic, political or regulatory conditions; changes in tax and other laws, regulations, rates and policies; the eligible patient base and commercial potential of Translarna, Emflaza, PTC-AADC, TEGSEDI, Waylivra, risdiplam or any of PTC's other product candidates: PTC's scientific approach and general development progress; PTC's ability to satisfy its obligations under the terms of the senior secured term loan facility with MidCap Financial; the sufficiency of PTC's cash resources and its ability to obtain adequate financing in the future for its foreseeable and unforeseeable operating expenses and capital expenditures; and the factors discussed in the "Risk Factors" section of PTC's Annual Report on Form 10-K for the year ended December 31, 2018, 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 Translarna, Emflaza, PTC-AADC, TEGSEDI, Waylivra or risdiplam.

The forward-looking statements contained herein represent PTC's views only as of the date of this presentation 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 presentation except as required by law.



### **2018: a transformational year**

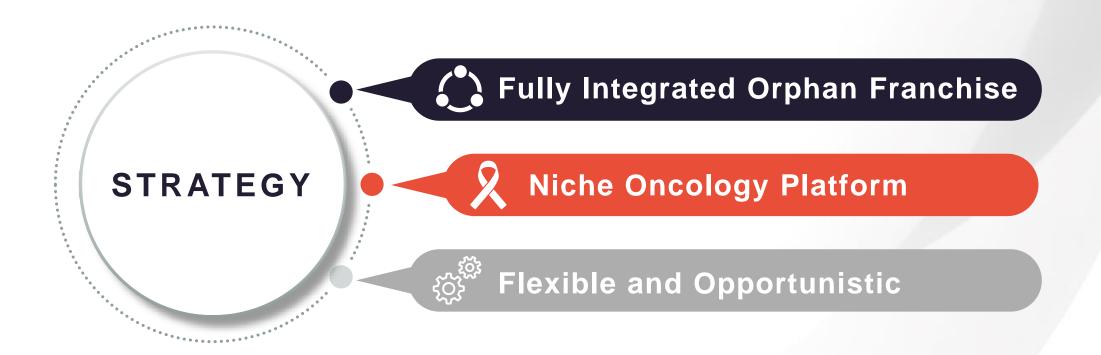




### Started 2018 with a clear 3-year vision

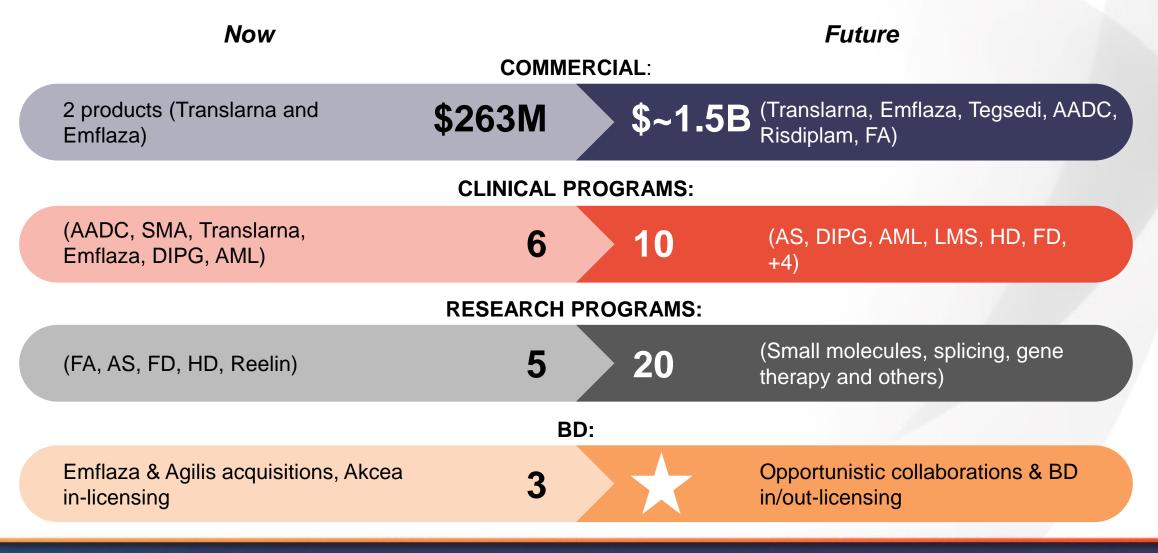
VISION

PTC is a fully integrated, innovative rare disorder company leveraging research capabilities and core technology platforms, building out worldclass commercial capabilities, and being an ideal partner for late-stage, ultra-orphan disorders for which there is high unmet medical need.



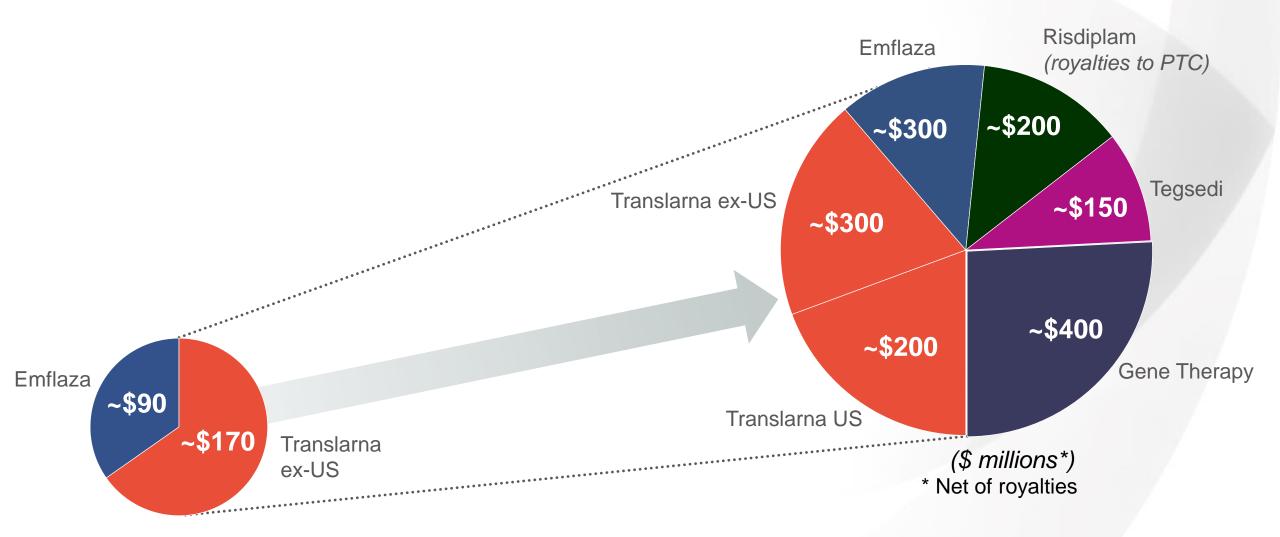


#### Looking forward: PTC growth vision for the next 5 years





### ~\$1.5B potential revenues to PTC by 2023





PTC

### Building a Leading Rare Disorder Biotech

**Global DMD Franchise** 



#### **PTC is <u>the leader</u> in DMD treatment 2 of 3 approved products**

Translarna is the first-ever targeted therapeutic approved for DMD anywhere in the world (EMA, 2014)



Translarna is now available in >40 countries worldwide ex-US and in trials for US potential approval in 2020



Emflaza is the first-and-only corticosteroid approved specifically for DMD anywhere in the world (US, 2017)

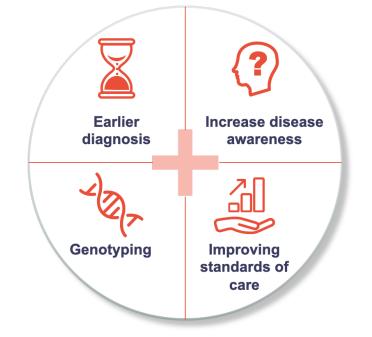


Emflaza data demonstrates best-in-class corticosteroid



PTC DMD franchise is now helping many thousands of families living with Duchenne around the world

## Continuing to drive long-term growth of DMD franchise



Label expansion under review for Translarna<sup>™</sup> in non-ambulatory patients by the EMA

ataluren

sNDA for Emflaza<sup>®</sup> 2-5 year old U.S. patients submitted with potential approval in '19





### An efficient, scalable business engine

- 2018 net product revenue of \$263M
- 2019 DMD franchise revenue guidance of \$285 - \$305M
- Established footprint in >40 countries worldwide
- Experienced commercial and medical teams in orphan disease
- Fully integrated global infrastructure



### Building a Leading Rare Disorder Biotech

Leveraging our Global Commercial Franchise



### **Preparing for successful launch**



preferable to infusions in the region



Diversifies our rare disease portfolio and revenues All key hiring completed in Latam

Regulatory dossier filed with ANVISA and raredisease priority review granted

**Expected approval YE:19** 



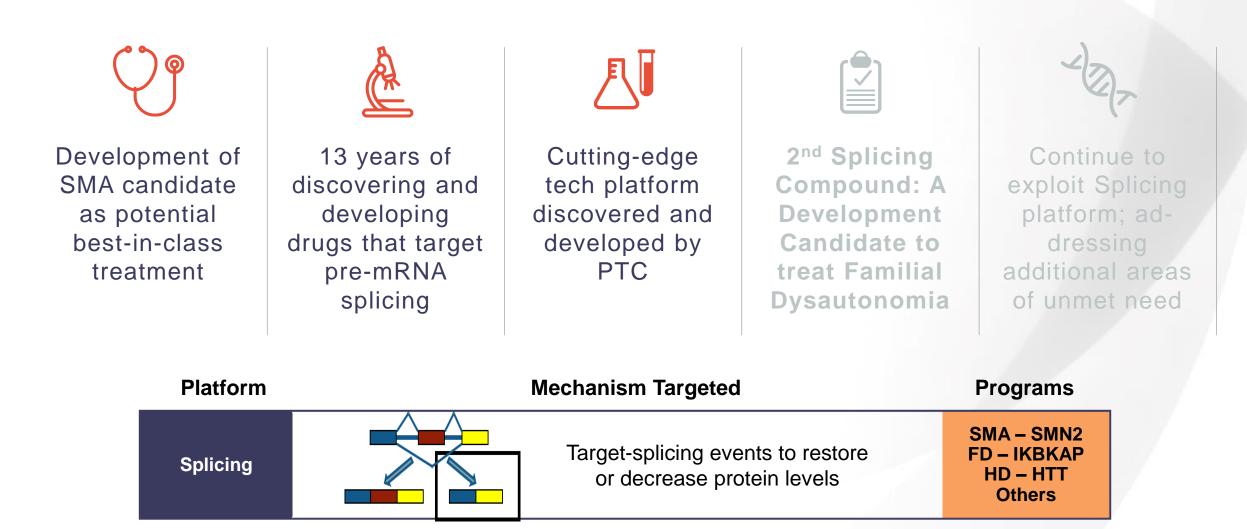
### Building a Leading Rare Disorder Biotech

Leveraging our R&D platforms to continue to grow our pipeline

I. Splicing platform



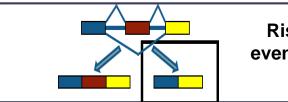
#### Leaders in small molecule RNA-splicing technology





### **Risdiplam in development for Spinal Muscular Atrophy (SMA)**

- Primary genetic cause of infant mortality
- Small molecule promotes the correct splicing of the mutant RNA
- Small molecule has potential for best in class therapy
- Broad tissue distribution and protein restoration



Risdiplam targets-splicing events to restore SMN protein levels



### **Risdiplam has potential to be a \$2B product**

- Revenue > \$1B subject to mid-teens\* royalty to PTC from Roche
- Potential to PTC to exceed \$200M/ year; including competitive assumptions for SMA gene therapy
- Firefish & Sunfish fully enrolled
- Risdiplam well tolerated at all doses, no ocular toxicity found in humans





\* Revenue estimates based on PTC solely on assumptions



#### SMA program Royalties & Milestones to PTC from Roche based on net sales

Tier of Calendar Year Worldwide Net Sales in \$US million	Percent (%) of Net Sales
0 – 500	8
> 500 - 1,000	11
> 1,000 - 2,000	14
> 2,000	16

Event Total Calendar Year Net Sales (\$US)	Payment (\$US)
> \$ 500,000,000	\$ 25,000,000
> \$ 750,000,000	\$ 50,000,000
> \$ 1,500,000,000	\$ 100,000,000
> \$ 2,500,000,000	\$ 150,000,000
Total Remaining	\$ 325,000,000



### **SMA milestones remaining**

Event	Payment (\$US)
Filing of an NDA in the US	\$ 15,000,000
Filing of an NDA in an EU country or with the EMA	\$ 15,000,000
Filing of an NDA in Japan	\$ 7,500,000
First Commercial Sale in US	\$ 20,000,000
First Commercial Sale in the EU	\$ 20,000,000
First Commercial Sale in Japan	\$ 10,000,000
Total Remaining	\$ 87,500,000



### Familial dysautonomia:

- Genetic disorder primarily affecting the sensory and autonomic neurons
- Caused by a splicing-altering mutation in the IKBKAP (ELP1) gene resulting in low levels of IKAP protein
- Ashkenazi Jewish ancestry, carrier frequency is ~1:30
- No therapies are currently available for FD, only supportive treatments
- PTC is collaborating with MGH and NYU to advance treatments for FD





### Building a Leading Rare Disorder Biotech

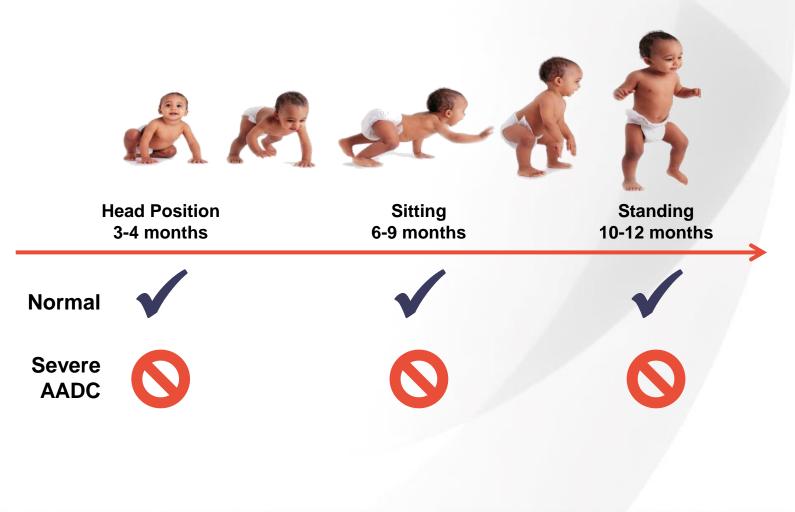
Leveraging our R&D platforms to continue to grow our pipeline

II. A CNS gene therapy platform

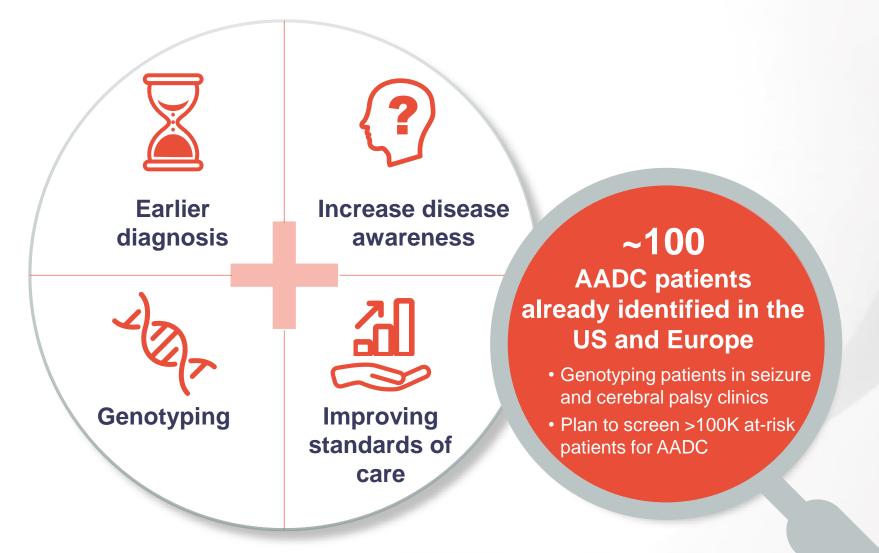


### AADC deficiency is a devastating disease with high unmet need

- Rare progressive childhood disease, affecting approximately 5,000 patients globally
- Children with severe AADC deficiency never achieve motor development milestones
- Profound development failure with shortened life expectancy in severe forms (4 - 8yrs)



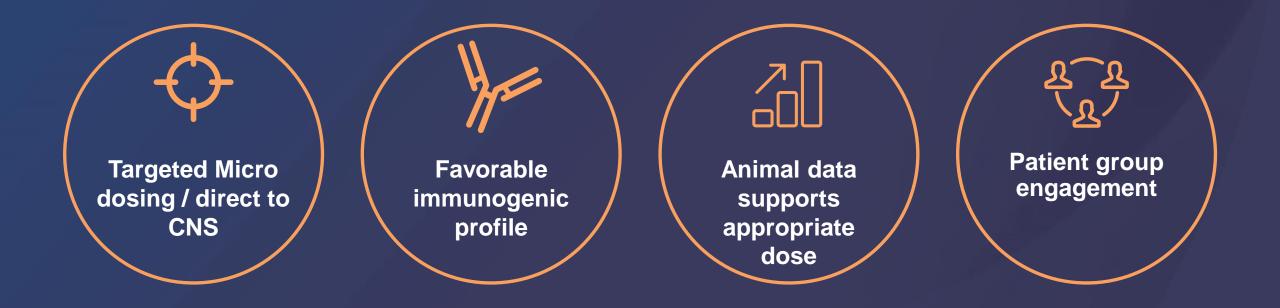
### **Patient identification is our expertise**





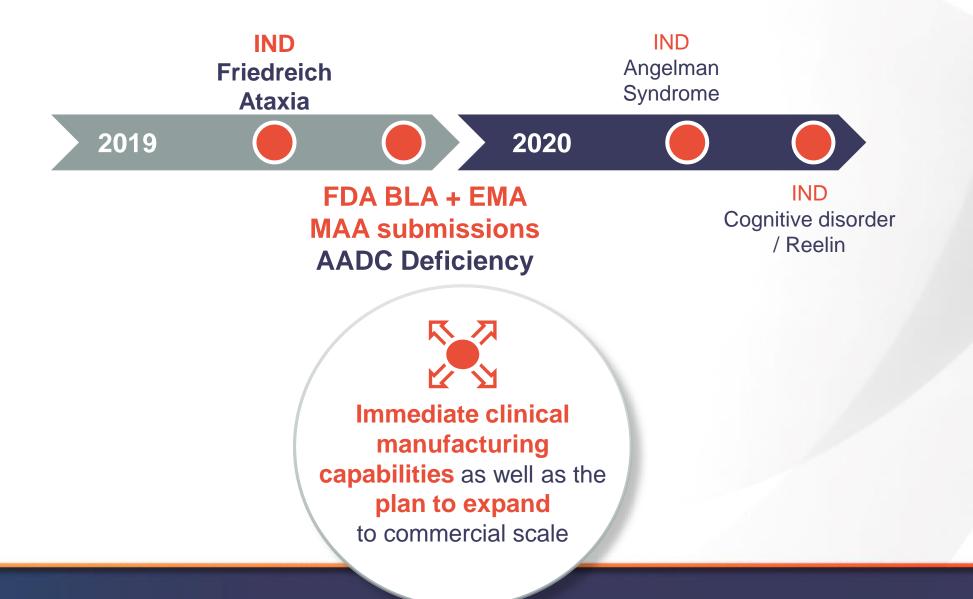
### Most advanced FA gene therapy program

PTC plans to submit IND in 2019





### 2019 goals: submit an AADC BLA & FA IND





### Gene therapy development strategy



Execute on current programs

Target dates:

- AADC Launch 2020
- Friedreich Launch 2023
  - Angelman IND 2020
    - Reelin IND 2020



Priority to secure inhouse manufacturing capabilities to support long-term capacity



Expand the pipeline with internal research and external collaboration



### Niche oncology strategy prioritizes value creation

**Internal research** 

Use of current platforms to add new targets to portfolio with focus on splicing

Solid tumors

PTC596 in pediatric brain tumor (DIPG) phase 1/2 trial and Leiomyosarcoma (LMS)

Hematologic malignancies

PTC299 AML dose escalation trial initiated in 2018

**Business development** 

Assess out-licensing opportunities



### Sustainable growth expected over next 5 years

Potential revenues to PTC from DMD franchise, Gene therapy programs, Tegsedi and Risdiplam

2023	
2022	
2021	Potential Emflaza Limb-Girdle 2i launch
0000	
2020	Potential Tegsedi, SMA, AADC and Translarna US launches
2019	Expected CMA milectories for regulatory filings. Emflete 2.5 Jaunah
2013	Expected SMA milestones for regulatory filings, Emflaza 2-5 launch





# measured <sub>by</sub> moments

Everyone has a different definition of progress. For the last 20 years, we've measured our progress researching rare disease in moments. Smiling ones and crying ones. Moments spent with our boys' families and ones with their friends. We know that every step forward comes after several steps backward, because we've lived it—whether spending time with families in their homes or with our scientists researching in our labs.

It can be easy to lose yourself as you progress further. Although we've grown, our heart remains in the same place, because we've never measured ourselves like larger companies do. Our biggest accomplishment has always been the time we can give to all of our families. Whether it's hours, days, months, or years, every small moment is a big win.