Neurocrine Biosciences, Inc.

THE NEUROENDOCRINE COMPANY™

THIRD QUARTER 2018

NOVEMBER 5, 2018

Safe Harbor Statement

In addition to historical facts, this presentation contains forward-looking statements that involve a number of risks and uncertainties. *These statements include, but are not limited to, statements related to the benefits to be derived from Neurocrine's products and product candidates, including INGREZZA and our partnered product, ORILISSA; the value INGREZZA, ORILISSA, and/or our product candidates may bring to patients; the continued success of the launch of INGREZZA; AbbVie's launch of ORILISSA; and the timing of completion of our clinical, regulatory, and other development activities and those of our collaboration partners. Among the factors that could cause actual results to differ materially from those indicated in the forward-looking statements are: the Company's future financial and operating performance; risks and uncertainties associated with the commercialization of INGREZZA and ORILISSA, including the likelihood of continued revenue and prescription growth of INGREZZA; risks or uncertainties related to the development of the Company's product candidates; risks and uncertainties relating to competitive products and technological changes that may limit demand for INGREZZA, ORILISSA, or a product candidate; risks associated with the Company's dependence on third parties for development and manufacturing activities related to INGREZZA and the Company's product candidates, and the ability of the Company to manage these third parties; risks that the FDA or other regulatory authorities may make adverse decisions regarding INGREZZA, ORILISSA, or the Company's product candidates; risks associated with the Company's dependence on AbbVie for the commercialization of ORILISSA and the development of elagolix; risks that clinical development activities may not be completed on time or at all; risks that clinical development activities may be delayed for regulatory or other reasons, may not be successful or replicate previous clinical trial results, may fail to demonstrate that our product candidates are safe and effective, or may not be predictive of real-world results or of results in subsequent clinical trials; risks that the benefits of the agreements with BIAL and Mitsubishi Tanabe may never be realized; risks associated with the Company's dependence on BIAL for tech transfer, development and manufacturing activities related to opicapone; risks associated with the Company's dependence on Mitsubishi Tanabe for the development and commercialization of valbenazine in Japan and other Asian countries; risks that INGREZZA, ORILISSA, and/or our product candidates may be precluded from commercialization by the proprietary or regulatory rights of third parties, or have unintended side effects, adverse reactions or incidents of misuse; and other risks described in the Company's periodic reports filed with the Securities and Exchange Commission, including without limitation the Company's quarterly report on Form 10-Q for the quarter ended June 30, 2018. Neurocrine disclaims any obligation to update the statements contained in this press release after the date hereof.*

Neurocrine Q3 2018 Highlights and Q4 2018 Key Activities

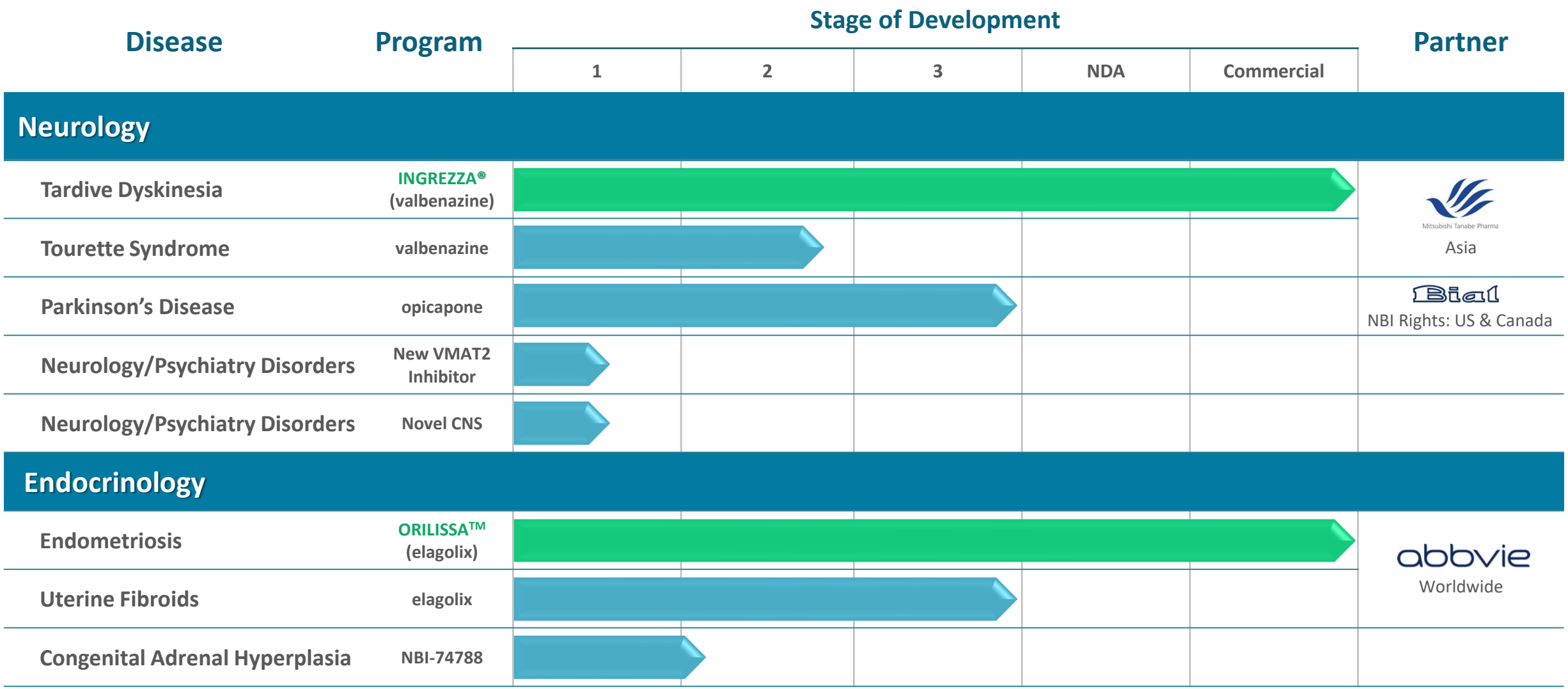
Third Quarter 2018 Highlights

- **Q3 2018 INGREZZA® Net Product Sales of $111.3MM with 19,400 TRx**
- **ORILISSA™ (elagolix) Approved by FDA for Endometriosis Resulting in $40MM Milestone from AbbVie**
- **Two New Compounds Advanced Into Phase I Clinical Studies for Disorders in Neurology and/or Psychiatry**
- **Expanded Sales Force Hired Late Q3**
- **Over $800MM In Cash and Investments**

Fourth Quarter 2018 Key Activities

- **Integration of Expanded Sales Force**
- **"Talk About TD"- Disease State Awareness TV Pilot Program**
- **T-Force GOLD: Top-Line Data from Tourette Syndrome Phase IIb Study Expected December 2018**
- **Complete Initial Single Ascending Dose Studies for the Two New Phase I Compounds**

Neurocrine Portfolio – November 5, 2018



NEUROCRINE BIOSCIENCES, INC.

INGREZZA® (valbenazine) capsules

First FDA Approved Treatment for Adults with Tardive Dyskinesia

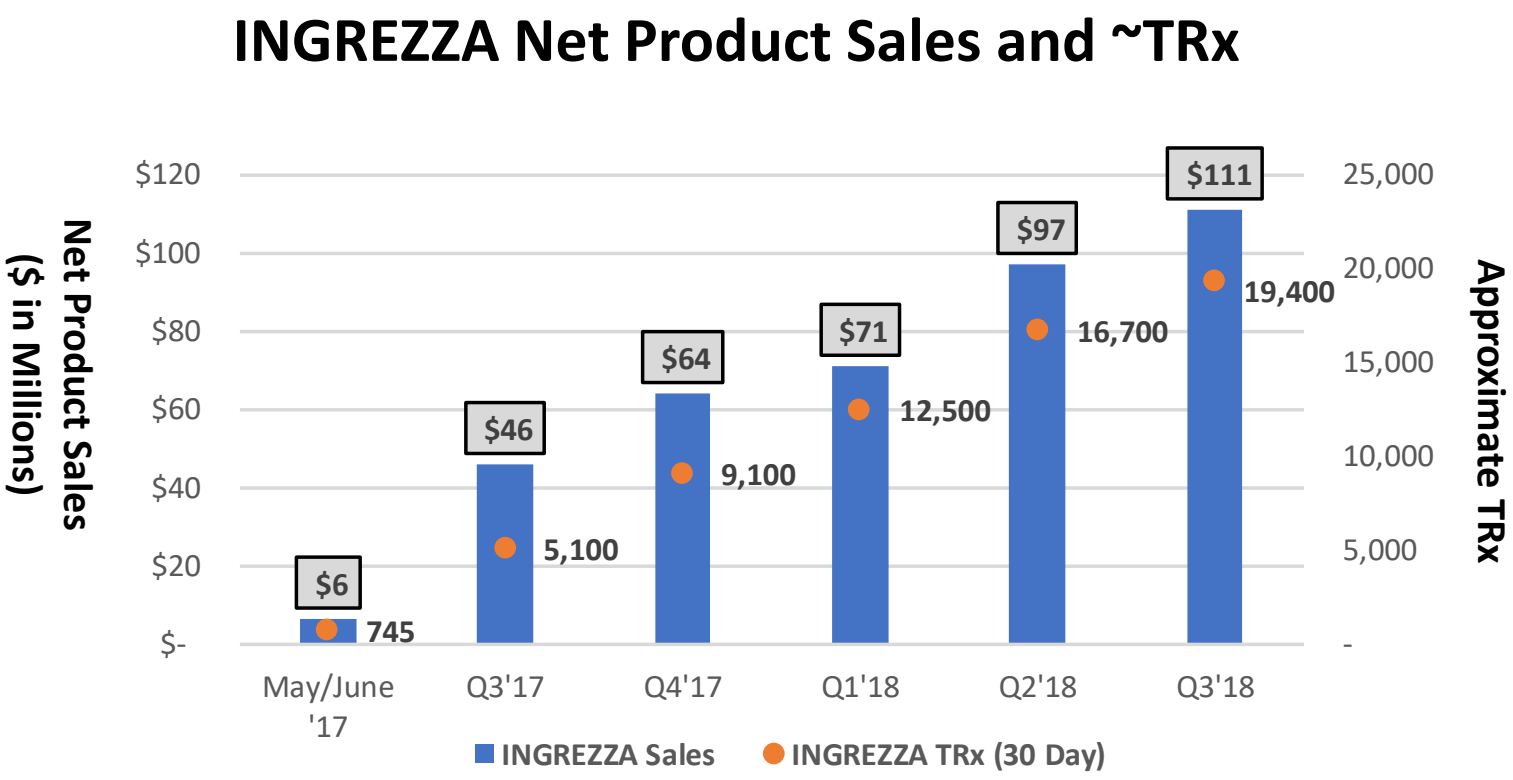
Neurocrine BIOSCIENCES

INDICATIONS AND USAGE

INGREZZA is a vesicular monoamine transporter 2 (VMAT2) inhibitor indicated for the treatment of adults with tardive dyskinesia

Initial dose is 40 mg once daily
After one week, increase the dose to the recommended dose of 80 mg once daily

INGREZZA® Launch Update



- **Launch Highlights**
  - Salesforce Established and Launched May 2017
  - Market Awareness Created for TD
  - Broad Prescriber Base Realized
- **Q4 2018 Launch Priorities**
  - Complete Salesforce Integration
  - Continued Clinician Disease State Education
  - Talk About TD - Disease State Awareness TV Pilot Program
  - Brand Awareness Initiatives

INGREZZA® Overview

TARDIVE DYSKINESIA AFFECTS APPROXIMATELY 500,000 PATIENTS IN THE US

- Involuntary Movement Disorder Caused by Prolonged Antipsychotic Use for Bipolar, Schizophrenia, and Depression
- More than a 400% Increase in Antipsychotic Prescriptions from 1990-2015 (~65MM TRx in 2017)
- Results in Dysregulation of Basal Ganglia Pathways Responsible for Movement Control

EFFICACY: RAPID AND ROBUST

- AIMS Week Six LS Mean Change from Baseline of -3.2 (80mg) vs. -0.1 in Placebo (KINECT 3)
- Significant Change Observed at 2 Weeks in Clinical Trials

LABEL: NO BOXED WARNING

- Concomitant Use with Psychiatric Medications
- No Dose Cap For CYP2D6 Poor Metabolizers

USE: ONCE A DAY, NO TITRATION

- Can Be Taken With or Without Food
- One Week to Reach Recommended Dose
- No Dosing Restrictions After Treatment Interruptions

Tardive Dyskinesia Overview: Symptoms

Oral and Facial Dyskinesia

- Abnormal tongue and lip movements
- Retractions of the corners of the mouth
- Abnormal eyelid closure or eyebrow movements
- Bulging of the cheeks
- Chewing movement

Limb Dyskinesia

- "Piano-playing" finger movements
- Tapping foot movements
- Dystonic extensor postures of the toes

Torso Dyskinesia

- Shoulder shrugging

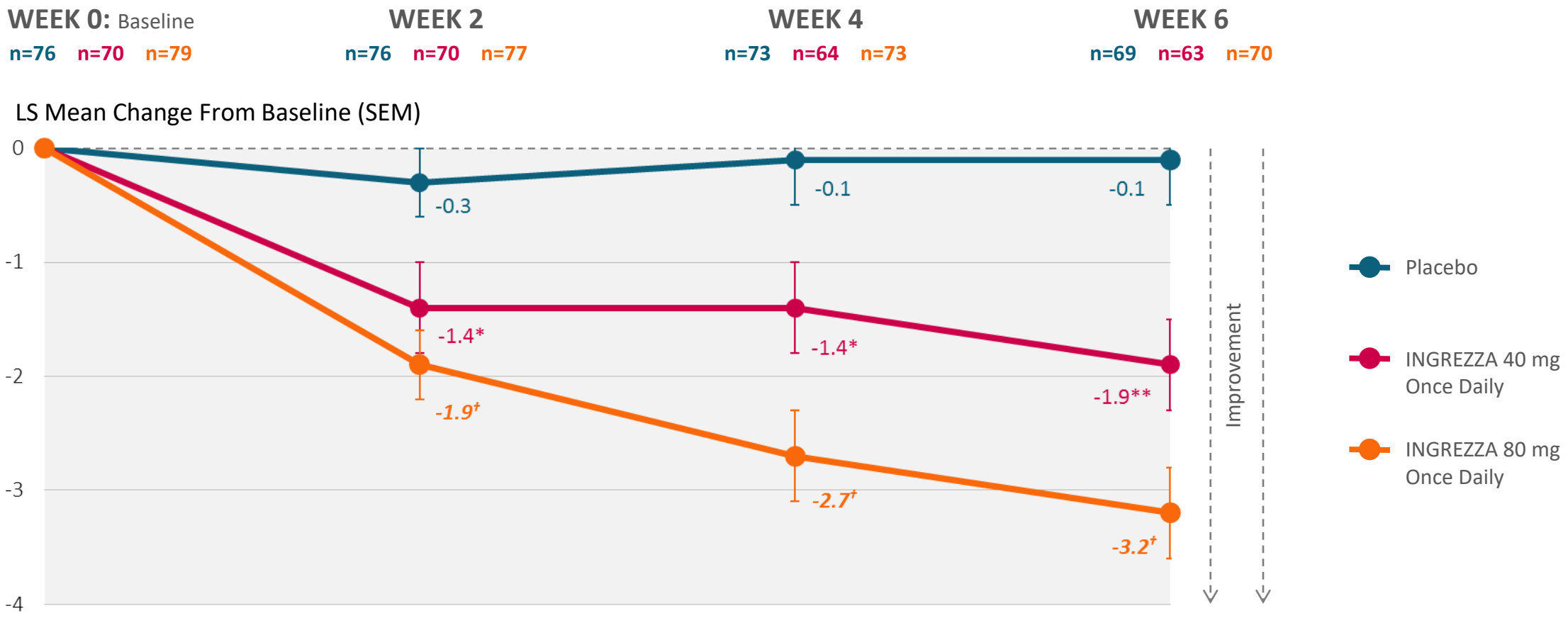
Axial Dystonia

- Twisting of the torso
- Rocking and swaying movements
- Rotatory or thrusting hip movements

Tarsy D. Curr Treat Options Neurol. 2000;2(3):205-214.

KINECT 3: INGREZZA® Reduction in Abnormal Involuntary Movement Scores (AIMS) at Each Study Visit Through Week Six

AIMS Change From Baseline by Study Visit (ITT Population)

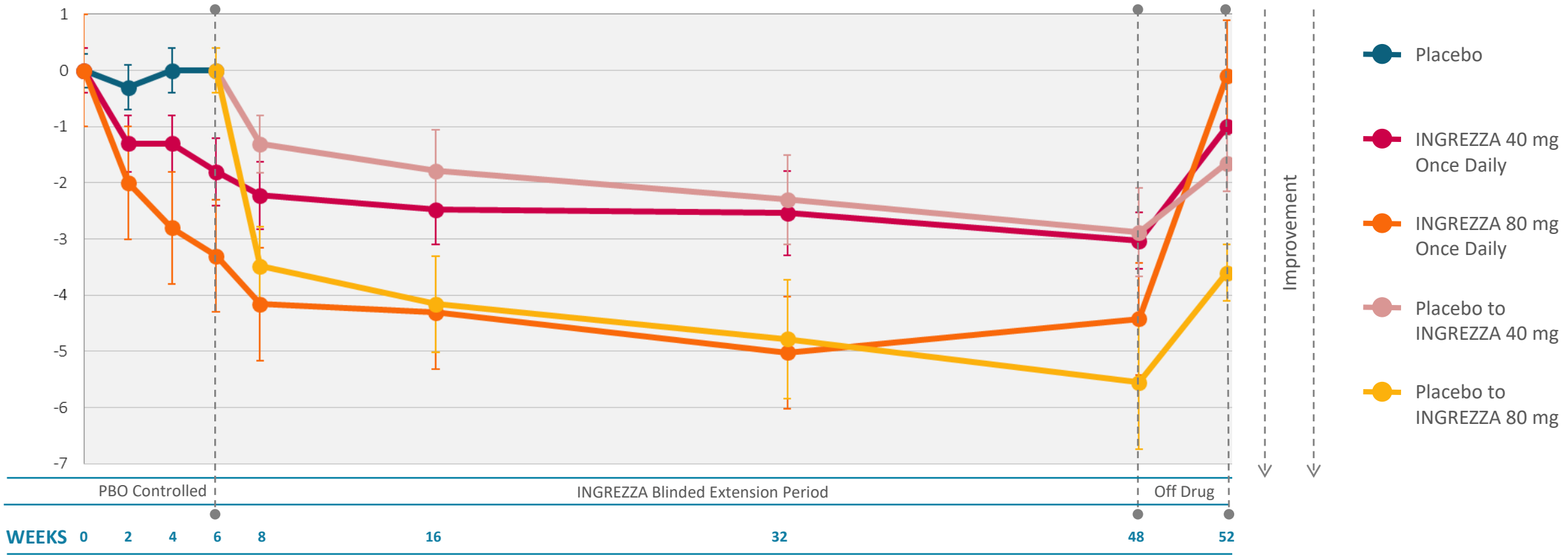


P values vs placebo: * <0.05 (nominal), ** <0.01 (nominal), † ≤0.001. AIMS change from baseline at weeks 2 and 4 not controlled for multiplicity. Data presented for ITT analysis set. Change in AIMS score analyzed by MMRM model. Treatment differences determined by comparison of LS means.

Hauser RA, et al. *Am J Psychiatry*. 2017. Mar 21: doi: 10.1176/appi.ajp.2017.16091037. [Epub ahead of print].
Data on file. Neurocrine Biosciences.

KINECT 3: AIMS Change From Baseline for INGREZZA® Groups
Long-Term Extension Period

AIMS Mean Change (SEM) From Baseline (ITT Population)



DB, double-blind. Data presented for ITT analysis set.
INGREZZA [package insert]. San Diego, CA: Neurocrine Biosciences; 2017.

abbvie

First FDA-approved Oral Treatment For The Management Of Moderate To Severe Pain Associated With Endometriosis In Over A Decade

Neurocrine BIOSCIENCES

INDICATIONS AND USAGE

ORILISSA is a gonadotropin-releasing hormone (GnRH) receptor antagonist indicated for the management of moderate to severe pain associated with endometriosis

ORILISSA™ (elagolix) Overview

Largest Ever Endometriosis Program Conducted to Date

3,000,000 PATIENTS WITH MODERATE TO SEVERE ENDOMETRIOSIS IN U.S.

- Chronic and Painful Disease Affecting ~10% of Women in Reproductive Age
- Three Common Symptoms: 1) Painful Periods (Dysmenorrhea), 2) Non-Menstrual Pelvic Pain (NMPP), 3) Pain with Sex
- A Leading Cause of Hysterectomy and Infertility

EFFICACY: RAPID AND ROBUST

- Efficacy as Early as 1 Month
- Approximately 45-75% Responder Rates Based on Combined Pain and Functional Impact Scales for Dysmenorrhea and NMPP
- Approximately 80-90% Responder Rates Based on Patient Global Impression of Change (Minimally to Very Much Improved)
- In Two, 6-month Replicate Phase 3 studies, All Women Had A BMD Z-score Above -2.0, Within The Normal Age-Adjusted Range

LABEL AND USE: NO BOXED WARNINGS OR REQUIRED MONITORING

- 150 mg QD and 200 mg BID Dosing Options
- Taken With or Without Food
- 24 Months of Therapy for 150mg QD with Physician Judgement Thereafter Based upon Treatment Goals

AbbVie COLLABORATION

- ORILISSA Commercialized by AbbVie in August 2018
- Discovered and Developed by NBIX Through Completion of Phase II studies
- In June 2010, AbbVie and NBIX Entered into Worldwide Development and Commercialization Collaboration
- Significant Development and Commercial Milestones Plus a Tiered, Double-digit Royalty on Net Sales

Elagolix For Women's Health (Partnered with AbbVie)

ORILISSA™ Approved for Endometriosis; Uterine Fibroids sNDA Submission Expected in 2019

ENDOMETRIOSIS

Impacts **10%** of childbearing women

7.5 million women in the United States

3.0 million diagnosed with moderate to severe

300,000 new diagnoses annually

105,123 days women were hospitalized in 2010 because of their disease

Approximately **125,000** hysterectomies performed/year

>$69B in societal burden / year

UTERINE FIBROIDS

Most common pelvic growth affecting **≥20%** of all women by age of 59 of childbearing women

9 million women with symptomatic uterine fibroids

3 million women currently diagnosed

450,000 new diagnoses / year

1 drug approved by FDA in past **20 years**

Approximately **250,000** hysterectomies performed annually

Leading cause of **infertility**

NEUROCRINE BIOSCIENCES, INC.

- *Pipeline Highlights*
- *2018 Milestones*

Neurocrine BIOSCIENCES

Valbenazine – Tourette Syndrome
Potentially First-in-Class VMAT2 Inhibitor

THE DISEASE

- Typical Age of Onset = **3 to 8 years old** ; Boys Outnumber **Girls 3:1**
- To Be Diagnosed, Must Have: (1) Multiple Motor and Vocal Tics, (2) Tics Frequency Nearly Every Day or Intermittently >1 Year, and (3) Not Been Caused by Medicines or Other Condition

CURRENT TREATMENT

- Cognitive Behavioral Therapy
- Only 1 New FDA-approved Medication in Past 30 Years
- Approved Therapies Comprised of Antipsychotics: Haloperidol, Pimozide, And Aripiprazole

PREVALENCE

- Estimated Prevalence At 0.6% To 1.1% with **Approximately 400,000** Patients in the U.S.
- Granted Orphan Drug Designation by FDA for Pediatric Patients with Tourette Syndrome

THE OPPORTUNITY

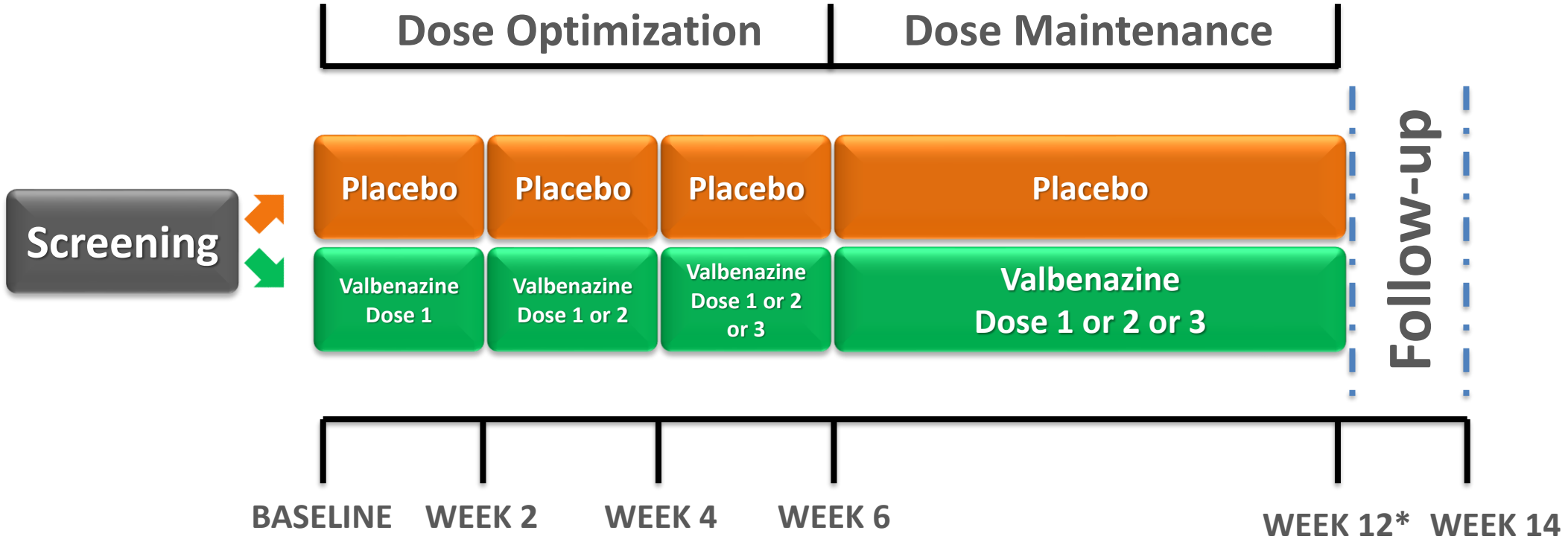
- A Once-daily Medication that
  - Is Safe And Well Tolerated for the Treatment of Tourette Syndrome
  - Not an Anti-psychotic

T-Force GOLD: Phase 2b Tourette Syndrome Study

12-week Study, N=120

T-FORCE GOLD

Topline Data Available End of 2018

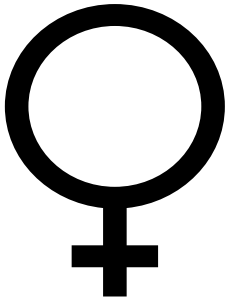


Primary Endpoint = Yale Global Tic Severity Scale (YGTSS) @ Week 12

Elagolix

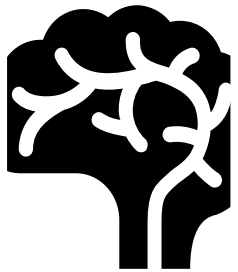
Uterine Fibroids – AbbVie Expects to File NDA in 2019 with Commercial Launch in 2020

Uterine Fibroids Phase III Topline Data (ELARIS UF-1, -2, and -EXTEND)



- **ELARIS UF-1 and -2: Phase III Studies Met Primary Endpoint (p<0.001)**
  - Responder rates of 68.5% and 76.2% (vs. 8.7% and 10.1% in placebo, respectively)
    - Clinical response defined as menstrual blood loss volume of <80 mL during month six **AND** a ≥50% reduction in menstrual blood loss volume from baseline to month six
  - Met all secondary endpoints at month six
  - Phase III data to be presented at a conference later this year
- **ELARIS UF-EXTEND: Phase III Study Showed Consistent Benefit at Month 12**
  - Responder rate of 87.9%
  - Safety profile consistent with previously reported topline results from the pivotal Phase 3 studies and no new safety signals were identified
  - Phase III extension data to be presented at a future medical conference

Recent Highlights
Opicapone For Parkinson's Disease



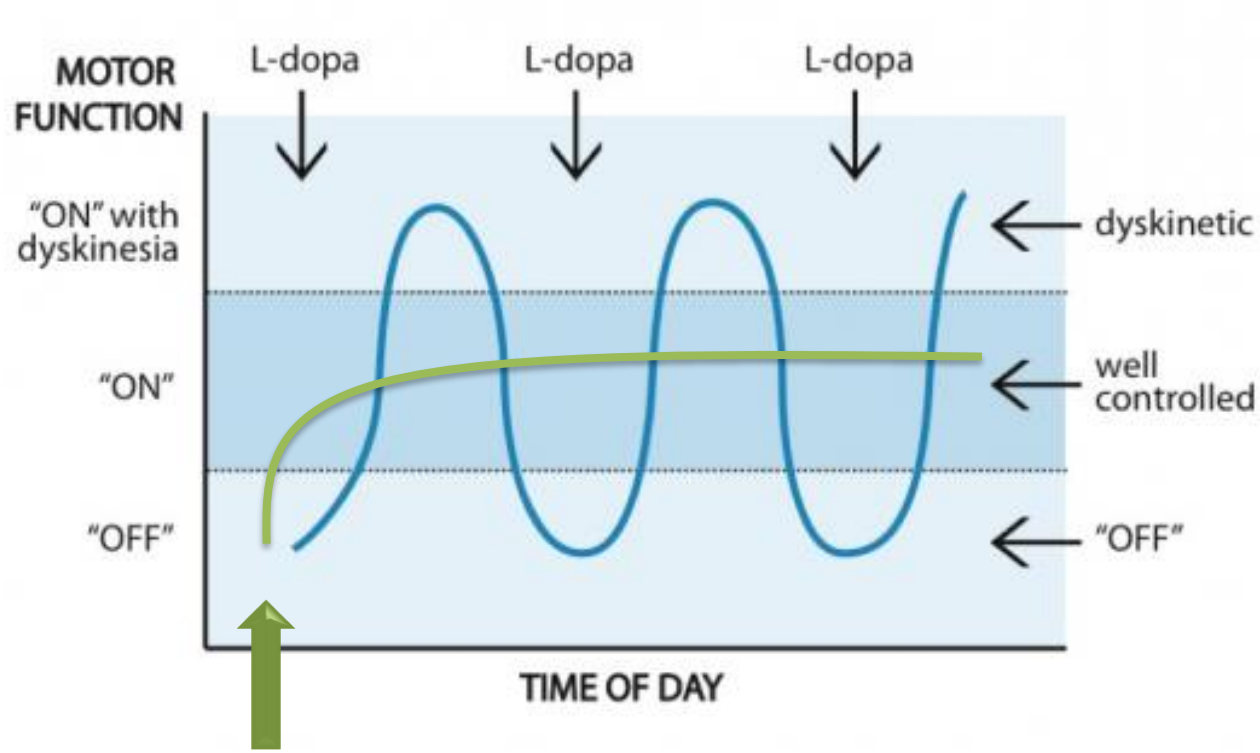
Opicapone Moving Forward with NDA Filing

- **Target Date for NDA Filing in Second Quarter of 2019**
- **Commercial Preparations Ongoing for an Anticipated 2020 Launch**

Opicapone: Reducing "Off-Time" For Patients with Parkinson's Disease

- **Parkinson's Disease (PD): Lifelong, Incurable, Progressive**
- **2nd Most Common Neurodegenerative Disease Following Alzheimer's Disease**
- **Approximately One Million Patient Cases in the United States**
- **While Incidence Rates Expected To Remain Constant, Prevalence Will Increase As A Result Of The Aging Population**
  - Increasing Life Expectancy
  - >10M Elderly People By 2020
- **Approximately Two-Thirds of Patients on L-dopa/C-dopa therapy**

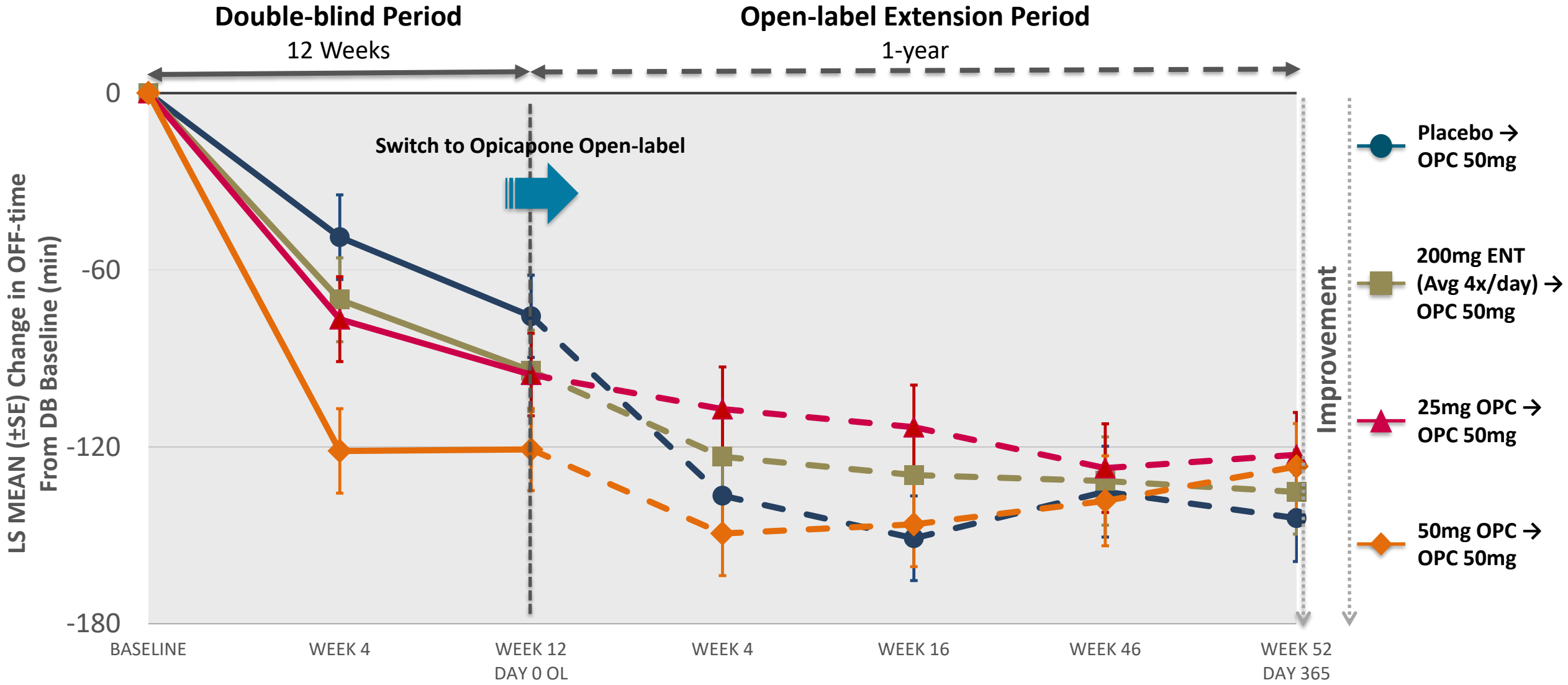
COMT Inhibition Reduces "Off-time" and Increases "On-time" Without Troublesome Dyskinesia



Sources: Datamonitor and Medical Literature review

Phase III, BIPARK I: Once Daily Opicapone Shows Maintenance of Effect at One Year*

Mean Change in Absolute Off-time



* During Open-label portion, all Subjects were rolled-over to 50mg OPC. Movement Disorder Society 2016.

LS mean = lease squares mean as estimated from the mixed model for repeated measurements; SE = standard error

Opicapone At-a-Glance
Potential Best-in-Class COMT Inhibitor

HISTORY

- NCE Discovered And Fully Developed By BIAL
- EMA Approved In June 2016 As ONgentys® (opicapone)
- Commercially-available In UK, Germany, Spain, Portugal, and Italy
- Partnered With ONO in Japan (PMDA Filing in 2018)
- In-licensed By Neurocrine Biosciences in February 2017

EXTENSIVE CLINICAL DEVELOPMENT

- 1200 Healthy Subjects In >25 Phase I Studies
- 1000 PD Subjects in Phase II-III Studies (Two Pivotal Studies)
- Positive Phase III Comparator Study with the Standard of Care

THE OPPORTUNITY

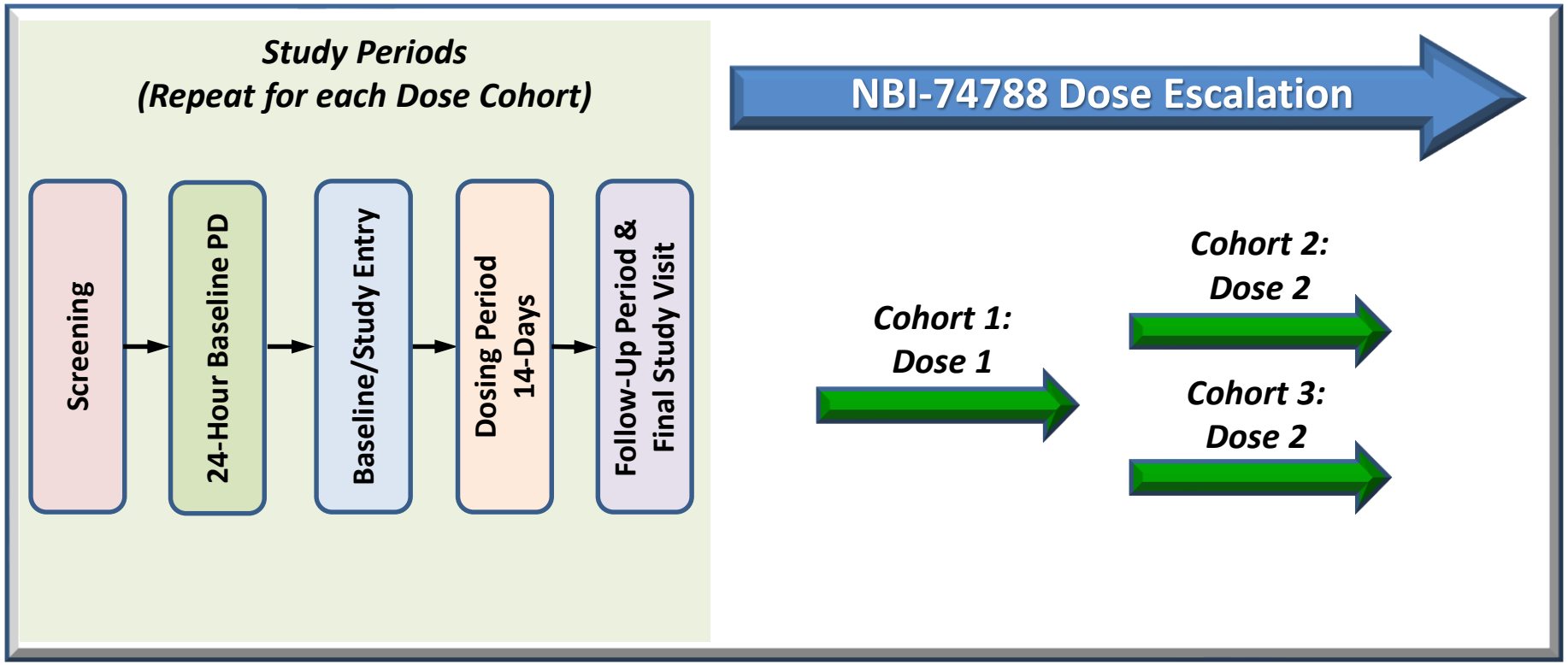
- Once A Day
- Reduced Pill Burden
- Well Tolerated
- More Efficacious Relative to the COMT Standard of Care

Recent Highlights
NBI-74788 For Congenital Adrenal Hyperplasia (CAH)

Initiated Phase II Study in Adult CAH Patients

- **Phase II Data in Q1 2019**
- **Completed Nonclinical Studies to Support Development in Pediatric Population**
- **Recent Addition of Third Cohort to Explore Dosing Convenience and Flexibility**

Phase II Study (Adult CAH): NBI-74788-CAH2001



Study methods:

- N = 24-30 young adult females and males (ages 18-50)
- PD measures: 17-OHP, androgens, ACTH, cortisol
- Standard PK and safety: PK sample collection, AEs, vitals, PEs, clinical labs

NBI-74788 – Classical Congenital Adrenal Hyperplasia (CAH)

Potentially First-in-Class CRF-R1 Antagonist

THE DISEASE

- Autosomal recessive genetic disorder resulting in:
  - Impaired cortisol biosynthesis, increased ACTH, and abnormal androgen accumulation
- Diagnosed at birth following near universal adoption of neonatal screening for 17-OHP excess
- Persistent, excessive androgens cause precocious puberty, fertility issues, virilization in females

CURRENT TREATMENT

- Glucocorticoid treatment to replace cortisol as well as activate HPA negative feedback loop to reduce ACTH levels, requires excessive dosing (supra-therapeutic)
  - Consequence: growth impairment, bone loss, and iatrogenic Cushing's Syndrome

PREVALENCE

- 20,000-30,000 patients in US
  - Qualifies for Orphan Drug Designation by FDA

PROGRAM GOAL: CURRENTLY IN PHASE II (ADULTS)

- The treatment of classical congenital adrenal hyperplasia (CAH) associated with high adrenocorticotropin levels, androgen excess and adrenal steroid insufficiency
  - Maintain physiologic glucocorticoid replacement while normalizing ACTH to reduce overproduction of androgens

2018 Clinical Development Milestones

Pipeline Expanding and Advancing

Program	Milestone
elagolix	✓ •Phase III Data For Uterine Fibroids
opicapone	✓ •FDA Meeting with FDA (Preparation for 2Q 2019 NDA Filing)
elagolix	✓ •Q3 PDUFA Date For Endometriosis
New	✓ •IND Submission And Initiation Of Phase I For Internally Discovered Small Molecule
NBI-74788	•Phase II Data For CAH (Adults) •Phase III Initiation For CAH (Adults) •Phase II Initiation For CAH (Peds)
valbenazine	•Phase IIb Data for Tourette Syndrome

Phase II Data (Adults) Now Expected In Q1 2019