Neurocrine Biosciences, Inc.
THE NEUROENDOCRINE COMPANY
In addition to historical facts, these slides contain 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 INGREZZATM; the size of the U.S. market for INGREZZA; the value INGREZZA brings to patients; the timing of INGREZZA's availability; the ability of Neurocrine to ensure patients have access to INGREZZA; and whether results from INGREZZA's clinical trials are indicative of real-world results. Among the factors that could cause actual results to differ materially from those indicated in the forward-looking statements are: risks and uncertainties associated with Neurocrine's business and finances in general, as well as risks and uncertainties associated with the commercialization of INGREZZA or the development of the Company’s product candidates; whether INGREZZA receives adequate reimbursement from third-party payors; the degree and pace of market uptake of INGREZZA; risks and uncertainties relating to competitive products and technological changes that may limit demand for INGREZZA; risks associated with the Company's dependence on third parties for development and manufacturing activities related to INGREZZA and the ability of the Company to manage these third parties; risks that additional regulatory submissions, for INGREZZA or other product candidates, may not occur or be submitted in a timely manner; risks that the FDA or other regulatory authorities may make adverse decisions regarding INGREZZA; risks that post-approval INGREZZA commitments or requirements may be delayed; risks that INGREZZA clinical trials may not be predictive of real-world results or of results in subsequent clinical trials; risks that INGREZZA may be precluded from commercialization by the proprietary rights of third parties, or have unintended side effects, adverse reactions or incidents of misuse; risks that the Company will be unable to raise additional funding, if required, to complete development of its product candidates or to commercialize INGREZZA; the Company’s ability to meet any of its previously disclosed milestones or financial projections, and changes to the assumptions underlying such projected milestones or financial projections; and other risks described in the Company’s periodic reports filed with the Securities and Exchange Commission, including without limitation the Company’s Annual Report on Form 10-K for the year ended December 31, 2016. The Company disclaims any obligation to update the statements contained in these slides after the date hereof.
Our Mission: To Relieve Patient Suffering and Enhance Lives

- Tardive Dyskinesia
- Tourette Syndrome
- Parkinson’s Disease
- Endometriosis
- Uterine Fibroids
- Essential Tremor
- Congenital Adrenal Hyperplasia
INGREZZA™ (valbenazine) capsules
First FDA Approved Treatment for Tardive Dyskinesia

APRIL 11, 2017
• The mechanism of action of INGREZZA in the treatment of TD is unknown, but is thought to be mediated through the reversible inhibition of VMAT2.¹

Tardive Dyskinesia Overview: Symptoms

Oral and Facial Dyskinesia
- Abnormal tongue and lip movements
- Retractions of the corners of the mouth
- Abnormal eyeline closure or eyebrow movements
- Bulging of the cheeks
- Chewing movement

Trunk Dyskinesia
- Shoulder shrugging

Limb Dyskinesia
- “Piano-playing” finger movements
- Tapping foot movements
- Dystonic extensor postures of the toes

Axial Dystonia
- Twisting of the trunk
- Rocking and swaying movements
- Rotatory or thrusting hip movements

Tardive Dyskinesia Overview

TD IS CAUSED BY EXPOSURE TO DOPAMINE RECEPTOR BLOCKING MEDICATIONS
- Antipsychotics for schizophrenia, bipolar disorder, depression
- Results in dysregulation of basal ganglia pathways responsible for movement control

TD EFFECTS APPROXIMATELY 500,000 PATIENTS IN THE US
- Newer atypical antipsychotics with diverse receptor specificity cause less extrapyramidal side-effects, but persistent TD risk
- Long-acting depot formulations of antipsychotics are also associated with risk of TD
- There has been more than a 400 percent increase in antipsychotics prescriptions from 1990-2015

NEUROCRINE FOCUSED ON DESIGNING A NOVEL MOLECULE FOR HYPERKINETIC MOVEMENT DISORDERS
- Selectivity for VMAT2 alone ensures no off-target pharmacology such as dopamine D2 antagonism, a known risk for TD
- Pharmacokinetic characteristics provide simple once daily dosing (without the need for titration)
- Drug properties allow for concomitant use of INGREZZA with existing psychiatric treatment regimens
INGREZZA™: Now Approved by the U.S. FDA

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™: Now Approved by the U.S. FDA

• No Black Box Warning
• No Contraindications
• No Requirement for AIMS
• Simple Once-Daily Dosing
KINECT 3: INGREZZA™ Reduction in Abnormal Involuntary Movement Scores at Each Study Visit Through Week Six

AIMS Change From Baseline by Study Visit

WEEK 0: Baseline
n=76  n=70  n=79

WEEK 2
n=76  n=70  n=77

WEEK 4
n=73  n=64  n=73

WEEK 6
n=69  n=63  n=70

LS Mean Change From Baseline (SEM)

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


KINECT 3: AIMS Change From Baseline for INGREZZA™ Groups

Long-Term Extension Period

AIMS Mean Change (SEM) From Baseline

WEEKS 0 2 4 6 8 16 32 48 52

PBO Controlled INGREZZA Blinded Extension Period Off Drug

Placebo
INGREZZA 40 mg Once Daily
INGREZZA 80 mg Once Daily
Placebo to INGREZZA 40 mg
Placebo to INGREZZA 80 mg

DB, double-blind. Data presented for ITT analysis set.
## INGREZZA™ Safety Profile

### Adverse Reactions Reported at ≥2% and >Placebo

<table>
<thead>
<tr>
<th>Category</th>
<th>INGREZZA Once Daily n=262 (%)</th>
<th>Placebo n=183 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Disorders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somnolence, fatigue and sedation</td>
<td>10.9</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Nervous System Disorders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticholinergic effects</td>
<td>5.4</td>
<td>4.9</td>
</tr>
<tr>
<td>Balance disorders/falls</td>
<td>4.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Headache</td>
<td>3.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Akathisia</td>
<td>2.7</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Gastrointestinal Disorders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vomiting</td>
<td>2.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Nausea</td>
<td>2.3</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Musculoskeletal Disorders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arthralgia</td>
<td>2.3</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Case 2: Year-Old Woman Diagnosed With Bipolar Disorder

**AIMS Baseline Score:** 14

**AIMS Week 6 Score:** 7

Baseline video

Week 6 video
Case 2: 47-Year-Old Woman Diagnosed With Bipolar Disorder

Baseline vs Week 6 AIMS Score

AIMS Baseline Score: 14

AIMS Week 6 Score: 7
Case 2: 47-Year-Old Woman Diagnosed With Bipolar Disorder

AIMS Baseline Score: 14

Baseline video

AIMS Week 6 Score: 7

Week 6 video
Early Launch Update
Launch Commenced May 1st, 2017

• Specialty sales team of 142 NeuroPsych Account Specialists were trained and deployed
  • Began calling on approximately 10,000 HCP targets
    • ¾ psychiatrists and ¼ neurologists
  • Additionally covering ~2,000 community mental health centers (CMHCs)
• Payor accounts team was trained on labeling and initiated product discussions with key payor accounts
  • Early meetings are going well; majority of formulary reviews expected late 2017 to early 2018
  • Reimbursement by formulary exception/prior authorization in the meantime
• HUB services program (INBRACE™) processing INGREZZA prescriptions
• Initial cohort of neurology and psychiatry physician speakers trained
  • Peer-to-peer educational programs began in May
Patient services include:

- Insurance benefits verification
- Reimbursement support (prior authorizations, denied claims appeals)
- Zero dollar co-pays (for commercially insured patients)
- INGREZZA Start – (up to 60 days of free product for patients experiencing reimbursement delays)
- Patient Assistance Program (for patients without insurance coverage for INGREZZA)
- Product support (outbound calls from a psychiatric nurse)
Key Medical Conferences

April 22-28, 2017
Boston

May 20-24, 2017
San Diego

June 4-8, 2017
Vancouver
Medical Conference Initiatives

• Commercial activities
  • 30’ x 30’ exhibit
  • Conference advertising
  • Sponsored product theaters
  • Scientific Leader meetings
• Key data presentation topics (10 posters)
  • Long term efficacy
  • Efficacy by underlying psychiatric condition
  • Long term safety and tolerability
  • Pharmacology
Conference Activities
INGREZZA™
Tourette Syndrome

Selective, once-daily VMAT-2 Inhibitor for Movement Disorders
Tourette Syndrome

- Prevalence Rate:
  » 0.6-1.1%
- Estimated 400k patients in the U.S.
  » 250-300k with moderate-severe symptoms
- 4:1 in boys:girls
- Only 1 new FDA approved therapy in past 30 years
  » Approved therapies include haloperidol, pimozide [risk for Tardive Dyskinesia], and aripiprazole
T-Force GREEN: Phase 2 Child/Adolescent Tourette Study

**Screening**
- Child/Adol Placebo (n=30)
  - Children Dose 1 (n=15)
  - Children Dose 2 (n=15)
- Adolescent Dose 1 (n=15)
- Adolescent Dose 2 (n=15)

**Week 6 Primary Endpoint**
- Assessments at screening and every two weeks thereafter

- **Primary = Yale Global Tic Severity Scale**
- **Secondary**
  - Rush Video Scale
  - Premonitory Urge for Tics Scale

*Two-week off-drug follow-up*
T-Force GREEN: What Did We Learn

- Clear exposure/response relationship
- Defines doses going forward
- We identified the correct population of children
- Study sites administered the YGTSS appropriately
- Ingrezza was very well tolerated
Ingrezza™ Intellectual Property Estate
Full 14 Years of Market Exclusivity Expected

- U.S. Patents – Composition of matter expiry
  Oct 2029
    » Potential Hatch/Waxman provision could extend to 2034
    » Claims cover composition of matter, pharmaceutical composition, methods of use for movement disorders and VMAT2 inhibition

- Corresponding patents in Europe and Japan

- Protection extends to most major markets globally
Faces of Parkinson’s Disease
Epidemiology

• The second most common neurodegenerative disorder

• Prevalence: 630,000 estimated in US (2010)\(^1\)
  - 1.2% prevalence > age 65
  - Medical expenses $14 billion, compared to $6 billion for non-PD population ($12K higher per capita)

• Risk factors
  - Age
  - Gender M>F (3:2)
  - Ethnicity (white>Asian>black)\(^2\)

• Is endowed with an exceptionally high binding affinity ($K_d$ sub-picomolar) that results in a slow dissociation from COMT and translates into a long *in vivo* duration of action.

• Is a reversible and peripherally selective COMT inhibitor that increases levodopa plasma levels when co-administered with levodopa and a peripheral dopa decarboxylase inhibitor (DDCI).
Clinical Experience

- 28 human pharmacology studies completed
  - More than 900 subjects exposed to opicapone (OPC)
- 2 phase II studies in Parkinson’s Disease (PD) patients completed
  - More than 40 patients exposed to OPC
- 2 pivotal phase III studies in fluctuating PD patients (BIPARK I and II)
  - Double-blind (DB) & 1-year open-label extensions completed
    - 951 patients exposed to OPC
    - High completion rates of DB and 1-year extensions
    - Both trials met the primary efficacy endpoint for OPC 50 mg
BIPARK-I and II – Absolute OFF-time reduction – Primary Endpoint

### BIPARK-I

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean OFF-time reduction (h)</th>
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<tbody>
<tr>
<td>Placebo</td>
<td>–0.9</td>
</tr>
<tr>
<td>200 mg ENT</td>
<td>–1.6</td>
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<tr>
<td>5 mg OPC</td>
<td>–1.5</td>
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<tr>
<td>25 mg OPC</td>
<td>–1.4</td>
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<tr>
<td>50 mg OPC</td>
<td>–2.0</td>
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### BIPARK-II

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean OFF-time reduction (h)</th>
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<tbody>
<tr>
<td>Placebo</td>
<td>–1.1</td>
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<tr>
<td>25 mg OPC</td>
<td>–1.7</td>
</tr>
<tr>
<td>50 mg OPC</td>
<td>–2.0</td>
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</table>

### Combined

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean OFF-time reduction (h)</th>
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</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>–0.97</td>
</tr>
<tr>
<td>25 mg OPC</td>
<td>–1.56</td>
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<tr>
<td>50 mg OPC</td>
<td>–1.94</td>
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*p<0.05 vs. placebo  **p<0.0001 vs. placebo  *p<0.05 for non-inferiority vs. ENT
<table>
<thead>
<tr>
<th>Disease</th>
<th>Program</th>
<th>Stage of Development</th>
<th>Partner</th>
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<tbody>
<tr>
<td>CENTRAL NERVOUS SYSTEM</td>
<td></td>
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<tr>
<td>Tardive Dyskinesia</td>
<td>INGREZATM</td>
<td>1</td>
<td>Asia</td>
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<td>Tourette Syndrome</td>
<td>valbenazine</td>
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<td>Ex-US &amp; Canada</td>
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<td>Parkinson’s Disease</td>
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<td>Essential Tremor</td>
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<td>Endometriosis</td>
<td>elagolix</td>
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<td>abbvie</td>
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<td>Uterine Fibroids</td>
<td>elagolix</td>
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<td>Worldwide</td>
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<td>Congenital Adrenal Hyperplasia</td>
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## 2017 Milestones

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Event</th>
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<tbody>
<tr>
<td>May</td>
<td>INGREZZA™ Commercial Launch for Tardive Dyskinesia</td>
</tr>
<tr>
<td>2\text{nd} Half</td>
<td>Begin INGREZZA™ Phase 2b in Tourette Syndrome</td>
</tr>
<tr>
<td>2\text{nd} Half</td>
<td>Begin Phase 2 PoC in CAH and Essential Tremor</td>
</tr>
<tr>
<td>3\text{rd} Quarter</td>
<td>Elagolix NDA Filing for Endometriosis</td>
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<tr>
<td>4\text{th} Quarter</td>
<td>Elagolix Topline Phase 3 Data for Uterine Fibroids</td>
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<tr>
<td>4\text{th} Quarter</td>
<td>Opicapone Path Forward</td>
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<tr>
<td>4\text{th} Quarter</td>
<td>New Compound Enters Clinical Development</td>
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## Financial Highlights

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<tr>
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<th>Year Ended December 31, 2016</th>
<th>Quarter Ended March 31, 2017</th>
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</thead>
<tbody>
<tr>
<td>Revenues and other Income</td>
<td>$ 21.3 million</td>
<td>$ 1.6 million</td>
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<tr>
<td>Operating Expenses</td>
<td>$ 162.4 million</td>
<td>$ 79.9 million</td>
</tr>
<tr>
<td>Net Loss</td>
<td>$ (141.1 million)</td>
<td>$ (78.3 million)</td>
</tr>
<tr>
<td>Cash, Investments, Receivables</td>
<td>$ 352.1 million</td>
<td>$ 274.4 million</td>
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