Lundbeck R&D Event 2019
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Certain assumptions made by Lundbeck are required by Danish Securities Law for full disclosure of material corporate information. Some assumptions, including assumptions relating to sales associated with products that are prescribed for unapproved uses, are made taking into account past performances of other similar drugs for similar disease states or past performance of the same drug in other regions where the products are currently marketed. It is important to note that although physicians may, as part of their freedom to practice medicine in the US, prescribe approved drugs for any use they deem appropriate, including unapproved uses, at Lundbeck, promotion of unapproved uses is strictly prohibited.
## Agenda

<table>
<thead>
<tr>
<th>Time (approx.)</th>
<th>Min.</th>
<th>Topic</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>13:00-13:30</td>
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<td>Coffee, registration</td>
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<tr>
<td>13:30-13:40</td>
<td>10</td>
<td>Welcome and introduction + Expand and Invest to Grow strategy</td>
<td>Dr. Deborah Dunsire</td>
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<tr>
<td>13:40-14:40</td>
<td>60</td>
<td>Lundbeck’s expanding R&amp;D pipeline</td>
<td>Johan Luthman</td>
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<tr>
<td></td>
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<td>Morten Grunnet</td>
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<td>Gary O’Neill</td>
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<td>14:40-15:05</td>
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<td>Eptinezumab profile</td>
<td>Bjørn Aaris Grønning</td>
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<td>15:05-15:35</td>
<td>30</td>
<td>Break</td>
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<td>15:35-16:00</td>
<td>25</td>
<td>Preparing to launch eptinezumab</td>
<td>Peter Anastasiou</td>
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<td>16:00-16:50</td>
<td>50</td>
<td>What makes migraine unique?</td>
<td>Dr. Messoud Ashina</td>
</tr>
<tr>
<td>16:50-17:20</td>
<td>30</td>
<td>Final remarks and Q&amp;A</td>
<td>Dr. Deborah Dunsire</td>
</tr>
</tbody>
</table>
Presenters

**Presenter**
- Deborah Dunsire
- Peter Anastasiou
- Morten Grunnet
- Bjørn Aaris Grønning
- Johan Luthman
- Gary O’Neill

**External speakers**
- Messoud Ashina, MD, PhD, DMSc

**Title**
- President & CEO
- Executive Vice President, North America
- Director, R&D Leadership Office
- VP, Clinical Research Neurology
- Executive Vice President, R&D
- CSO, Lundbeck La Jolla Research Center

- Professor of Neurology – Faculty of Health and Medical Sciences; Rigshospitalet Glostrup
Speaker: Dr. Deborah Dunsire

Expand and Invest to Grow
EXPAND AND INVEST TO GROW

The Expand and Invest to Grow strategy plan

EXPAND AND INVEST TO GROW

- Maximize Existing Brands
- Expand Operating Space
- Maintain Focus on Profitability
- Rebuild Pipeline
- Enhance Organizational Agility and Collaboration

Make a difference for patients

Drive business results
EXPAND AND INVEST TO GROW

We maximize growth opportunities in our current business and maintain a disciplined approach to cost

We maximize the performance of existing brands

We enhance organizational agility and collaboration

We expand our global footprint

We continue to maintain high profitability, but allow flexibility to invest in growing the top-line and profits

We launch new indications and improved formulations
Through excellent execution, together with targeted acceleration projects, we maximize our existing brands

**Strategic Brands +29%**

- Onfi, Sabril, Xenazine
- Mature brands
- Strategic Brands

**Mature Brands Unchanged**

Current negative revenue performance driven by genericization of U.S. neurology products
Expand and Invest to Grow has expanded our operational space

Guided by Lundbeck’s Purpose:
Tirelessly dedicated to restoring brain health, so every person can be their best
### Expand and Invest to Grow - 11 projects included in our R&D pipeline in February 2019

<table>
<thead>
<tr>
<th>Project</th>
<th>Indication</th>
<th>Phase I</th>
<th>Phase II (PoC)</th>
<th>Phase III</th>
<th>Filing</th>
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<tr>
<td>Brexipiprazole</td>
<td>Bipolar mania</td>
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<td>Brexipiprazole</td>
<td>PTSD</td>
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<td>Foliglurax (mGlur4 PAM)</td>
<td>Parkinson’s disease</td>
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<td>Lu AF11167 (PDE 10 inhibitor)</td>
<td>Schizophrenia</td>
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<td>Abilify Maintena 2-mth</td>
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<td>Lu AF82422 (alpha-synucleinmAb)</td>
<td>Parkinson’s disease</td>
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<tr>
<td>Lu AF28996 (D3/D2 agonist)</td>
<td>Parkinson’s disease</td>
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<td>Lu AF35700</td>
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Project under review
## Expand and Invest to Grow - 15 projects included in our R&D pipeline in November 2019

<table>
<thead>
<tr>
<th>Project</th>
<th>Indication/label expansion</th>
<th>Phase I</th>
<th>Phase II (PoC)</th>
<th>Phase III</th>
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<tbody>
<tr>
<td>Eptinezumab (anti-CGRP mAb)</td>
<td>Migraine prevention</td>
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<td>Eptinezumab (anti-CGRP mAb)</td>
<td>&quot;Treat and Prevent&quot;, migraine</td>
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<td>Agitation in Alzheimer’s disease</td>
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<td>Brexiprazole</td>
<td>Borderline Personality Disorder</td>
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<td>Brexiprazole</td>
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<td>Foliglurax (mGlur4 PAM)</td>
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<td>Lu AF11167 (PDE 10 inhibitor)</td>
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<td>Lu AG06466 (MGLL)</td>
<td>Tourette Syndrome</td>
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<td>Schizophrenia</td>
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<td>Lu AF28996 (D1/D5 agonist)</td>
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<td>Lu AG06466 (MGLL)</td>
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<tr>
<td>Lu AF88434 (PDE1b inhibitor)</td>
<td>Cognitive impairment</td>
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<tr>
<td>Lu AG09222 (PACAP mAb)</td>
<td>Migraine</td>
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<td>2025</td>
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<tr>
<td>Lu AF87908 (Tau mAb)</td>
<td>Alzheimer’s</td>
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Speaker: Dr. Johan Luthman

Expanding the R&D pipeline
# Expanding the R&D Pipeline

*Expand and Invest to Grow* has significantly strengthened the pipeline.

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We focus on translational research to bridge the gap between pre-clinical and clinical research

The human brain has complexity and executive functions that are not represented in other mammals (translational research is difficult)

Translation at behavioural level proofs difficult for existing cognition assays and tests

Translation at biological level more direct as long as targets and mechanisms are conserved
Long-term vision: Transformative neuroscience

Reduce attrition rates in R&D by...

Focus on biomarkers and experimental medicine

Projects enter development only with clear biomarker strategy

Projects enter clinical phase III only after solid supportive Proof of Concept

"Let the molecule guide us"
We are simplifying the organization to drive operational excellence

Simplified Global R&D Organization

Special emphasis on...
- Establishing Experimental Medicine
- Establishing Patient Insight Function
- Strengthened Regulatory Affairs

Cross-functional Decision Making

Portfolio Management Board established to increase research, development and commercial alignment on all programs
Speaker: Dr. Johan Luthman

Pivotal programmes

Phase III
Restoring brain health

Brexipiprazole – Agitation in Alzheimer’s
Brexpiprazole in pivotal programme for the treatment of agitation in Alzheimer’s disease

Alzheimer’s Disease (AD)

50 million people worldwide have dementia (Alzheimer’s is the most common cause of dementia contributing 60-70% of cases)

It is predicted that the number of people affected by dementia will almost double every 20 years

People with Alzheimer’s live an average of 8 years after their symptoms become noticeable to others

The total global societal costs of dementia are estimated to be USD 600 billion

Agitation in Alzheimer’s disease (AAD)

>20% of individuals in a community setting and >50% of nursing home residents with dementia have agitation

1.5-2m dementia patients in the U.S. with agitation / aggression

No FDA approved medication

Associated with:

Increased caregiver burden leading to increased cost to the healthcare system

Decreased functioning

Earlier nursing home placement
Grossberg: “Efficacy and safety of fixed-dose brexipiprazole for the treatment of agitation in Alzheimer’s type dementia” (AAGP2018)

CMAI<sup>1)</sup>: Brexipiprazole 2mg/day statistically significant improvement over placebo

CGI-S score<sup>2)</sup>: Numerical improvement was observed for brexipiprazole 2 mg/day from Week 6 - 12

No new safety signals were observed

Study I (NCT01862640)

N = 433 patients

Male or female, aged 55-90 years

1 mg, 2 mg and placebo

12 weeks’ treatment duration

CMAI<sup>1)</sup>: 2 mg statistically superior to placebo

CGI-S<sup>2)</sup>: 2 mg not statistically superior to placebo

1. Primary efficacy endpoint: Cohen-Mansfield Agitation Inventory (CMAI) total score, a 29-item scale to systematically assess the symptoms of agitation | 2. Key secondary efficacy endpoint: Clinical Global Impression Severity of Illness (CGI-S) score, a 7-point scale assessing overall severity of the patient’s agitation | Presented at the 42th Annual Meeting of the American Association for Geriatric Psychiatry (AAGP), Honolulu, Hawaii, 15-18 March 2017
Cummings: “Efficacy and safety of flexibly-dosed brexpiprazole for the treatment of agitation in Alzheimer’s type dementia” (AAGP2018)

CMAI: Numerically favourable for flexibly-dosed brexpiprazole (0.5–2 mg/day) over placebo, but not statistically significant

Brexiprazole 2 mg/day showed improvement for both the primary and key secondary efficacy endpoints (post-hoc analyses, p≤0.01)

Brexiprazole 2 mg/day may be an effective and well-tolerated new treatment for agitation in Alzheimer’s dementia

Study II (NCT01922258)

N = 270 patients

Male or female, aged 55-90 years

Flexible dose: 0.5-2 mg

12 weeks' treatment duration

CMAI1): 0.5-2 mg not superior to placebo

CGI-S2): 0.5-2 mg superior to placebo

Efficacy and safety of flexibly-dosed brexpiprazole for the treatment of agitation in Alzheimer’s type dementia: a randomized, double-blind, flexibly-dosed, 12-week, placebo-controlled global clinical trial

Jeffrey Cummings, Evakohegy, Victor Mergel, Joan Amatriek, MetteKrog Josiasssen, 3 Didier Meulien, 3 Mary Hobart, Raymond Sanchez, Margaretta Nyillas, 2 MaryStomkowskia, Ross A. Baker, Robert McQuade, George T. Grossberg

1. Primary efficacy endpoint: Cohen-Mansfield Agitation Inventory (CMAI) total score, a 29-item scale to systematically assess the symptoms of agitation. 2) Key secondary efficacy endpoint: Clinical Global Impression-Severity of Illness (CGI-S) score, a 7-point scale assessing overall severity of the patient’s agitation. Presented at the 42th Annual Meeting of the American Association for Geriatric Psychiatry (AAGP), Honolulu, Hawaii, 15-18 March 2018
**Study objective**

To compare the efficacy of 2 doses of brexpiprazole with placebo in subjects with agitation associated with dementia of the Alzheimer’s type (n = ~225)

**Third study out of three in the pivotal programme (phase III):**

Brexpiprazole (fixed dose 2mg and 3mg) and placebo

**Primary endpoint:** Cohen-Mansfield Agitation Inventory (CMAI) total score (Week 12)

**Secondary endpoint:** Clinical Global Impression Severity of Illness (CGI-S) score

Study started in May 2018 - headline results due early 2021

Fast Track designation granted February 2016

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1. Clinicaltrials.gov ID: NCT03548584
Restoring brain health

Brexpiprazole – Post-Traumatic Stress Disorder (PTSD)
PTSD offers an exciting opportunity for brexipiprazole

**PTSD epidemiology**

- >8m – U.S. prevalence (2.5%-3.6%)\(^1,2\)
- ~3m – Severe (36.6%)\(^2\)
- ~1.8m – pharmacological treatment rate (~60%)\(^2\)

**Post-traumatic Stress Disorder (PTSD)**

- ~8.6m U.S. adults affected, but ~80% estimated to be undiagnosed
- Growing economic and social burden of care
- Inadequate response with approved SSRIs - polypharmacy the norm

**PoC study\(^4\) showed...**

Combination of brexipiprazole and sertraline demonstrated improvement in symptoms of PTSD versus placebo (\(p<0.01\)) on the primary endpoint (CAPS-5 total score\(^3\))

The efficacy supported by multiple secondary endpoints

The overall safety and tolerability of brexipiprazole were good

---

Both studies in brexipiprazole pivotal programme in PTSD commenced

Study objective

To evaluate the efficacy, safety, and tolerability of 12-week brexipiprazole + sertraline combination treatment in adult subjects with PTSD (n = ~600)

Two studies initiated in the pivotal programme (phase III)

Brexipiprazole (fixed 2, 3mg and flexible dose up to 3mg) in combination with sertraline

Primary endpoint: Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) total score

Secondary endpoints: Change in Clinical Global Impression - Severity (CGI-S) score; Change in Brief Inventory or Psychosocial Functions (B-IPF) score

First study started in October 2019 and the second in November 2019 - headline results due 2022

U.S. dedicated study

1. Clinicaltrials.gov ID: NCT04124614
Speaker: Dr. Johan Luthman

Proof of Concept
Phase II
Restoring brain health

Brexipiprazole – Borderline Personality Disorder (BPD)
Borderline Personality Disorder (BPD) offers an exciting opportunity for brexipiprazole

**Borderline Personality Disorder (BPD)**

Dysfunctions in the serotonergic and dopaminergic systems is considered as possible causes for symptoms associated with BPD.

Pharmacotherapy focuses on key symptoms (aggression, irritability, depressed mood, behavioural dys-control and affective dysregulation, anxiety, psychoticism and hostility) which brexipiprazole is hypothesized to address.

No drugs approved for BPD

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Brexpiprazole PoC study in Borderline Personality Disorder (BPD) commenced

**Study objective**

To evaluate the efficacy and safety of 12-week brexpiprazole for the treatment of subjects diagnosed with BPD (n = ~240) to provide a pharmacological treatment for BPD

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**PoC study (phase II)**

Brexpiprazole (flexible dose 2-3mg) and placebo

**Primary endpoint:** Zanarini Rating Scale for Borderline Personality Disorder (ZAN-BPD) total score (Week 12)

**Secondary endpoints:**
- Clinical Global Impression - Severity of Illness (CGI-S); Patient’s Global Impression of Severity (PGI-S);
- Patient’s Global Impression of Change (PGI-C) Scale;
- Clinical Global Impression - Improvement (CGI-I) Scale

Headline results due in 2021 - Fast Track designation granted October 2019

1. clinicaltrials.gov ID: NCT04100096
Restoring brain health

Lu AF11167
Negative symptoms represent a major unmet medical need

Schizophrenia has three core symptoms: Positive, cognitive and negative symptoms

Negative symptoms together with impaired cognition are the major cause of the marked functional disability

Negative symptoms are thus a key contributor to the enormous costs of schizophrenia

No pharmacological treatment

40 - 50% of patients with schizophrenia are clinically stable outpatients; of those 40% experience at least two prominent negative symptoms (~20% of the total schizophrenia population)

Prevalence (major countries)

4.7m
Prevalence of schizophrenia (G7)

3.5m
Treatment prevalence (75%)

1.7m
Clinical stable outpatients (50%)

0.8m
Negative symptoms (40%)

Source: Decision Resource; Schizophrenia | Landscape & Forecast 2018
PDE10 inhibition: A new approach to obtain a combined D₁ agonist-like effect and D₂ antagonist-like effect

**D₁ Receptor**
- Stimulator
- Inhibitor
- R⁺
- AC
- Gs
- Gβγ
- cAMP
- AMP
- excitability↑

**D₂ Receptor**
- Stimulator
- Inhibitor
- R⁺
- AC
- Gs
- Gβγ
- cAMP
- AMP
- excitability↑

**D₁ receptors**
- D₁ receptors are stimulatory GPCRs
- Dopamine at the D₁ receptor stimulates adenylate cyclase and increases cAMP
- By blocking cAMP breakdown PDE10i mimics D₁ stimulation

**D₂ receptors**
- D₂ receptors are inhibitory GPCRs
- Dopamine at the D₂ receptor inhibits adenylate cyclase and decreases cAMP
- By blocking cAMP breakdown PDE10i mimics D₂ antagonism
Proof-of-concept study commenced in December 2018

**Monotherapy**

Two fixed-flexible doses, once daily
1-2mg/day
3-4mg/day
placebo

N = ~250 patients

Primary endpoint: Change from baseline to Week 12 in BNSS total score**

Several secondary endpoints

Expected completion: 2021

<table>
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<tr>
<th></th>
<th>Screening 1</th>
<th>Screening 2</th>
<th>Baseline</th>
<th>Completion</th>
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<tr>
<td>Restretistability</td>
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<td>6 months</td>
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<td>Screening &amp; Withdrawal of prior treatment</td>
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<td>1-4 weeks</td>
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<td>Placebo Run-in Phase</td>
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<td>DB Treatment Phase</td>
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<td>Follow-up</td>
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<td>2 weeks</td>
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AF 11167 flex-flexible low dose
n = 80

AF 11167 flex-flexible high dose
n = 80

Placebo
n = 80

* NCT03793712 | ** BNSS: Brief Negative Symptoms Scale
Restoring brain health

Foliglurax
Foliglurax is a potential new treatment for Parkinson’s disease

PD-LID is the most important unmet medical need after disease modification in Parkinson’s disease.\(^1\)

PD-LID affects ~50% after 5-10 years increasing to ~90% after 10-15 years of L-DOPA therapy

170-200,000 patients in the U.S. with PD-LID.\(^2\)

Once established, PD-LID is difficult to treat

Foliglurax increases the sensitivity of the mGlu4 receptor towards glutamate and hence reduces, in a physiologically relevant manner, the abnormal glutamate stimulation that is believed to develop during levodopa dosing

1. Datamonitor. 2) PD-LID = Parkinson’s Disease—Levodopa-Induced Dyskinesia. 3) Modified based on Jankovic, Mov. Disorder 2005
Phase IIa study *(AMBLLED)* investigating foliglurax near final recruitment

**Study objective**

Evaluate the efficacy, safety and tolerability of 28-Day oral treatment with foliglurax in reducing motor complications of levodopa therapy in subjects with Parkinson’s disease experiencing end-of-dose wearing off and levodopa-induced dyskinesia *(AMBLLED)*

**Phase IIa (PoC)**

- Two active arms (10mg and 30mg) + placebo
- ~165 patients (Europe)

**Primary endpoint**: Change from baseline to end of Treatment Period in the daily awake OFF time based on subject Hauser diary entries

Phase IIa started in July 2017; headline results due in H1 2020

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1. Clinicaltrials.gov ID: NCT03162874
Speaker: Morten Grunnet

Early projects
Lu AF82422: Potential disease modifying antibody for Parkinson’s disease

Pathological alpha-synuclein is released to extracellular space upon cell death and can mediate seeding and aggregation of alpha-synuclein in healthy neurons\(^1\).

This process is considered to be central in the disease progression of Parkinson’s, Multiple System Atrophy and other synucleopathies\(^2\).

Lu AF82422 is able to inhibit seeding of pathological form(s) of alpha-synuclein in vitro and in vivo models.

Has the potential to induce immune-mediated clearance of alpha-synuclein/mAb complexes

Pathogenesis of Parkinson’s

Ongoing phase I study\(^3\):
- Healthy non-Japanese and Japanese subjects and in patients with Parkinson’s
- ~45 participants
- Primary endpoint: Number of patients with incidence of Treatment-Emergent Adverse Events (safety and tolerability) from dosing to Day 84
- Study initiated in July 2018 with expected completion H2 2020

\(^1\) Poewe et al. Nature Reviews Disease Primers vol. 3 17013 (2017) \(\text{https://www.nature.com/articles/nrdp201713}\)
\(^3\) NCT03617569
**EARLY PROJECTS**

**Lu AF28996: A potentially new oral treatment for Parkinson’s patients experiencing motor fluctuations**

### D₁/D₂-type agonists

- Known to be highly efficacious even in the later stages of Parkinson’s, but the currently available agonist (apomorphine) cannot be delivered by oral route
- Improving the treatment of fluctuating Parkinson’s patients answers a strong unmet need and is an attractive commercial target

### Lu AF28996

- A highly potent agonist at the D₁- and D₂-type dopamine receptors
- Designed to solve a long-standing challenge of oral delivery of D1/D2-type agonists such as apomorphine
- Parkinson’s disease (moderate to advanced) as adjunct to L-DOPA (or monotherapy pending data)
- Further expansion of patient population and symptoms (including non-motor symptoms) are being considered

### Phase I studies¹:

- Single- and sequential-ascending-dose of Lu AF28996 to healthy young men
- ~38 participants
- Open-label study investigating the safety, tolerability and pharmacokinetic profile of Lu AF28996
  - Phase Ia initiated in May 2018, completed in August 2019
  - Phase Ib to be initiated Q1 2020

¹ NCT03565094
Lu AG09222: Potential to build a migraine franchise in the future with early-stage PACAP² inhibitor mAb

A differentiated approach to migraine prevention

• Highly potent and selective humanized PACAP binding antibody
• Preclinical data¹ indicate that PACAP2 and CGRP3 have differentiated pharmacology with respect to migraine-associated symptoms
• Potential for mono-therapy in non-CGRP³ induced migraine or combination therapy with eptinezumab

¹ Loomis et al: Pharmacologic characterization of ALD1910, a potent humanized monoclonal antibody against the pituitary adenylate cyclase-activating peptide, JPET Fast Forward ² Pituitary adenylate cyclase-activating peptide ³ Calcitonin gene-related peptide
**Phosphodiesterase 1 (PDE1)**

PDE1 is an intracellular enzyme responsible for the degradation of cGMP and cAMP

cGMP is a critical intracellular signalling molecule that regulates neuronal functions like synaptic plasticity, cognitive function, neuronal survival and axonal regeneration

Inhibition of PDE1 increases the intracellular messenger cGMP and cAMP (cGMP>cAMP)

---

**Lu AF88434**

Lu AF88434 is a potent and selective phosphodiesterase PDE1b inhibitor (PDE1b-i)

SAD study investigating the safety, tolerability, PK/PD properties of Lu AF88434

N = ~66 participants

Study initiated in July 2019 with expected completion during 2020

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1) Clinicaltrials.gov ID: NCT04082325
Lu AF87908 – Potential for delaying disease progression in Alzheimer’s or other tauopathies

Neutralization
- Inhibit seeding
- Inhibit toxicity
- Inhibit spreading

Clearance
- Mediate phagocytosis of Ab/Tau complexes

Competitive advantage by
- Binding to and inhibition of pathological seeding form of Tau
- Specific and pathology directed mAb
- Retaining the capacity to mediate active clearance of Tau

Phase I study
- SAD study in healthy subjects and AD patients
  1) NCT04149860, Immunoglobulin G1 (ig) is types of antibodies (Ab), Source: Nature Reviews Neuroscience 17, 22-35
- N = ~100 participants
- Study initiated in September 2019 with expected completion during 2021

Hypothesis: Hyperphosphorylated Tau (PHF-Tau) is the pathogenic species
Speaker: Gary O’Neill

Lu AG06466

former ABX-1431
Serine hydrolases: A rich source of diverse new medicines

A large enzyme family (~250)

Diverse substrates

Proteins, peptides, lipids, etc

Diverse functions

CNS signalling, inflammation, metabolism

Common catalytic mechanism

Active-site serine residue for catalysis

Lundbeck La Jolla Research Center’s platform unlocks the entire superfamily
Endocannabinoid augmentation as a therapeutic strategy

Two main endogenous cannabinoid ligands:
Anandamide (or AEA) and 2-Arachidonylglycerol (or 2-AG)

MGLL inhibition leads to a selective and spatio-temporal specific elevation of 2-AG levels

FAAH inhibition
'Potentiation of AEA signalling'

MGLL inhibition
'Potentiation of 2-AG signalling'

THC - non physiologically relevant CB1 activation

AEA
Endogenous ligand (partial agonist)

2-AG
Endogenous ligand (full agonist)

Exocannabinoids like THC
'Direct and blunt activation of CB1-R'

CB1
G_{i/o}

CB1 signalling

2-AG and AEA act as 'brake'

Rectify excessive neurotransmission [anti-nociceptive, anxiolytic, anti-spasmodic]
MGLL is a fundamental regulator of neurotransmission

Endocannabinoid signalling limits excessive neurotransmission

MGLL inhibition amplifies retrograde endocannabinoid signalling and rectifies overactive synapses

Restoration of balanced neurotransmission beneficial to many neurological disorders

Endocannabinoids (such as 2-AG) naturally modulate neurotransmission
MGLL inhibitors may benefit many conditions

Traumatic Brain Injury  Stroke  Haemorrhagic Stroke

Tourette Syndrome  Huntington’s Disease  Parkinson’s Disease  MS Spasticity

Neuropathic Pain  Central Pain

Treatment Resistant  Epilepsy

Epilepsy Syndromes

OCD  ADHD  Anxiety / PTSD  Depression  Agitation in Dementia
MGLL inhibitor portfolio: Harnessing the therapeutic potential of the endocannabinoid system

Access to world class MGLL development candidates to bolster the portfolio

Pipeline in a drug – many potential indications

Discovery site in U.S.

World class platform to address novel biological targets

Chemical biology tool box to compliment the Lundbeck neuroscience and modality expertise
Lu AG06466 differentiation from exocannabinoids

Endocannabinoid system regulates neurotransmission throughout the brain.

Endocannabinoid signaling is triggered in hyperactive circuits.

Synthetic/exogenous agonists (e.g., THC) activate cannabinoid receptors globally.

MGLL inhibition amplifies endocannabinoid signaling in dysregulated circuits.

Catalepsy Bar

Exocannabinoid WIN 55,212-2

MGLL Inhibitor ABD-101970

MGLL inhibitor Lu AG06466: Potential for greater safety and efficacy than exocannabinoids.
Lu AG06466: Being tested in Tourette Syndrome (TS)

Modulates the endocannabinoid system preferentially in areas where neuronal circuits are excessively activated

Initial trials ongoing in TS’s and neuropathic pain

Phase Ib trial\(^1\) in adult TS patients (n = 23) demonstrated significant effects across multiple endpoints of tic reduction

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**Paediatric population:**

0.3% – 0.6% of children (138,000 – 276,000)

Estimated 40% have moderate to severe disease needing treatment

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**Adult population:**

Estimated 10%-20% continue to have the disease

We estimate that adult prevalence is equal to that of paediatrics

Co-morbidities like OCD, ADHD and anxiety persist and can be impairing

---

\(^1\) NCT03058562

Tourette syndrome

Tics are just the tip of the iceberg
Phase IIa study investigating Lu AG06466 near finalization

**Study objective**

This study will assess the safety, tolerability, and effect on tics Lu AG06466 (previously ABX-1431) in adults with Tourette Syndrome or chronic motor tic disorder in an 8-week study. It is a two-part study.

Part 1 is a double-blind, randomized, placebo-controlled study at two target dose levels.

Part 2 is an optional, open-label, non-randomized study.

**Phase IIa (PoC):**

Two active arms (10mg and 30mg) + placebo

N = ~48 patients

**Primary endpoint:** Change from baseline in Total Tic Score of the Yale Global Tic Severity Scale (YGTSS-TTS) compared with placebo

**Secondary endpoint:** Adult Tic Questionnaire (ATQ); Premonitory Urge for Tics Scale (PUTS); Clinical Global Impressions Scale for Improvement (CGII) and several AE related endpoints

Phase IIa started in October 2018; headline results due in H1 2020
# Lu AG06466 in phase Ib safety and tolerability study in neuropathic pain

<table>
<thead>
<tr>
<th>MGLLi have shown to reduce pain in preclinical models of inflammatory, post-surgical, and neuropathic pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant scientific evidence supports the use of exocannabinoids for the treatment of pain, including controlled clinical studies in patients with NP</td>
</tr>
<tr>
<td>MGLLi may offer significant therapeutic benefits over exocannabinoids, with potential for increased efficacy and a better safety profile</td>
</tr>
</tbody>
</table>

## Neuropathic pain (NP)

- NP results from damage to the nervous system in the brain or spinal cord or in the peripheral nerves
- NP is a common and debilitating condition that may occur in 10% of Americans
- Current approved treatments for NP include gabapentinoids and antidepressants
- Beyond the lack of effective medications, many patients chronically use opioid drugs
- There is a pressing need for efficacious non-opioid therapies for NP

## Phase I study

- Designed to identify a titration regimen of Lu AG06466
- ~39 adult patients with peripheral neuropathic pain
- The efficacy of Lu AG06466 in treating neuropathic pain will be assessed by the change from baseline in pain intensity scores using numerical rating scale (NRS-11)

---

1) NCT03447756. This study will enrol patients with peripheral neuropathic pain due to one of the four following diagnostic groups: post-herpetic neuralgia, diabetic peripheral neuropathy, small fiber neuropathy or post-traumatic neuropathic pain.
Speaker: Bjørn Aaris Grønning

Eptinezumab
Migraine is one of the most debilitating diseases globally

~18m
~18m individuals are candidates for prevention

<50%
~ less than 50% are treated

4-72 hours
Attacks usually last 4-72 hours

Most disabling disease for people under 50 years - the most productive years of people’s lives

Symptoms include extreme pain, nausea, vomiting, extreme sensitivities to light and sound, gastrointestinal issues

Significant unmet medical needs remain with existing preventive treatments, including speed of onset

Chronic migraine often leads to depression, anxiety, and sleep disturbances

Migraine profoundly affects patients’ lives

93% say migraine affects their ability to work\(^1\)

86% say migraine affects their ability to maintain relationships with children\(^1\)

89% say migraine affects their ability to maintain relationships with a partner\(^1\)

4/10 Only 4/10 are satisfied with their current migraine treatment\(^1\)

Patients value efficacy and onset of efficacy regardless of the mode of administration

87% rate effectiveness as important in determining whether they accept treatment (highest-rated)\(^2\)

79% rate fast acting as an important treatment feature when considering migraine prevention\(^2\)

---

Migraine prevention represents a large and under served market

Addressable population (major countries)

~134m – Migraine prevalence
~41m – diagnosed patients (30%)
~18m – Eligible for prevention (43%)
~9m – Currently on prophylactic treatment

Migraine is divided into two major categories, episodic and chronic depending on the frequency of headaches

1-14 headache days per month
>14 headache days per month

Episodic
Episodic eligible for preventive Tx
Chronic

<4 migraine days per month
>4 migraine days per month
≥8 migraine days per month

Eptinezumab: Rapid, effective and sustained elimination of calcitonin gene-related peptide (CGRP)

- Humanized, IgG1, anti CGRP monoclonal antibody
- Selectively and potently inhibits CGRP biological activity
- 5 pM binding affinity for CGRP
- Persistent molecular activity (t 1/2 ~30 days)
- 100% bioavailability when administered by iv infusion
- Quarterly dosing schedule

Two large pivotal studies including ~2,000 patients demonstrated sustained efficacy and good tolerability.

**Promise 1**

**in Episodic Migraine Patients**

(N=888; baseline ~9 migraine days/month)

- Met primary and key secondary endpoints
- Good tolerability profile at all dosage levels

**Promise 2**

**in Chronic Migraine Patients**

(N=1,072; baseline ~16 migraine days/month)

- Met primary and all key secondary endpoints
- Good tolerability profile at both dosage levels

---

**Powerful**

≥50%, ≥75% and 100% reductions in migraine days

**Fast**

Onset of prevention Day One post-infusion

**Sustained**

for 3 months following a single administration and sustained or further increased with subsequent infusions

---

1) Clinicaltrials.gov ID:NCT02559895 (PROMISE 1) and NCT02974153 (PROMISE 2)
Promise 1: A phase III study to evaluate the efficacy and safety of eptinezumab for prevention of frequent episodic migraine

- Eptinezumab reaching statistical significance for the primary and all key secondary endpoints
- Migraine day prevalence dropped over 50% on Day 1 and reduction was sustained through Day 28
- Subjects experienced significantly fewer days with migraine
- Responder rates further improved with subsequent infusions for the 300 mg dose group

1) Clinicaltrials.gov ID: NCT04082325
Eptinezumab achieved meaningful reductions in migraine activity as early as Day 1 that were sustained through Week 12: results from Promise-2 phase III trial in chronic migraine

- In subjects with chronic migraine beginning on the 1st day post-infusion, a single infusion of eptinezumab significantly reduced migraine activity for 3 months
- >61% of subjects’ migraine days were reduced by ≥75% and, on average, 38% experienced a ≥75% reduction over 3 months
- The % of subjects with a migraine on Day 1 was reduced >50% following eptinezumab infusion and the reduction was sustained for 1 month

Day 1 Reductions from baseline in percentages of subjects with a migraine maintained on average through 28 Days

- At Day 1 following eptinezumab infusion, migraine risk was reduced by 52%

≥75% Migraine Responder Rates (RR) following a single administration

- An average of 38% of subjects treated with eptinezumab achieved a ≥75% reduction in monthly migraine over 3 months
- This RR benefit was obtained as early as Weeks 1–4 and was maintained through Weeks 9–12

NCT02974153. Presented at 2018 AAN Annual Meeting, April 21-27, Los Angeles, CA
Significant reduction in monthly migraine days (MMDs) with eptinezumab at both 100mg and 300 mg

Eptinezumab has shown high response rates, especially in adult patients experiencing frequent, chronic migraine

- 60% of patients had ≥50% reduction in migraine days
- ~40% of patients had ≥75% reduction in migraine days
- Patients that experienced no migraines for at least half of the study period (≥3 mth):
  - 100mg: 14.0%
  - 300mg: 19.1%
  - Placebo: 4.9%

Promise-1
(Change from baseline in MMDs)

<table>
<thead>
<tr>
<th></th>
<th>Infusion 1 (Months 1-3)</th>
<th>Infusion 2 (Months 4-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-3,9</td>
<td>-4,3</td>
<td>-4,5</td>
</tr>
<tr>
<td>-3,2</td>
<td>-4,8</td>
<td>-5,6</td>
</tr>
</tbody>
</table>

Promise-2
(Change from baseline in MMDs)

<table>
<thead>
<tr>
<th></th>
<th>Infusion 1 (Months 1-3)</th>
<th>Infusion 2 (Months 4-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-7,7</td>
<td>-8,2</td>
<td>-8,8</td>
</tr>
</tbody>
</table>

*p=0.0182; †p=0.0001; †p<0.0001 vs placebo. Months 4-6 were not included in the prespecified statistical algorithms.
HIT-6 is a widely used patient-reported outcome measure in headache and migraine research

- General measure of impact of headache on daily life\(^1\)
- Six-item scale (severe pain, limits daily activities, lie down, too tired, felt fed up or irritated, limits concentration)\(^1\)
- Scoring\(^2\):
  - \(\geq 60\): severe impact
- A reduction in total HIT-6 score of \(\geq 6\) points has been reported to be clinically meaningful\(^3\)
- 300 mg significant at \(p<0.0001\)

---

Eptinezumab treatment well-tolerated across doses as compared to placebo

Safety and tolerability were evaluated in the Promise 1 and Promise 2 trials

In pooled data assessment across the two trials, nasopharyngitis (swelling of the nasal passages and the back of the throat) was the only AE occurring at an incidence of ≥2.0% than placebo.

Other AEs: Upper respiratory infection, nausea and urinary tract infection, arthralgia (joint pain), dizziness, anxiety and fatigue, which all occurred at a similar incidence to placebo (less than 2% difference vs. placebo) in the pooled data set.

Adverse reaction occurring with an incidence of ≥2% for either dose of eptinezumab and ≥2% greater than placebo for Promise 1 and Promise 2

<table>
<thead>
<tr>
<th>Adverse reactions</th>
<th>Eptinezumab 100 mg every 3 months N=579</th>
<th>Eptinezumab 300 mg every 3 months N=574</th>
<th>Placebo every 3 months N=588</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasopharyngitis</td>
<td>6%</td>
<td>8%</td>
<td>6%</td>
</tr>
</tbody>
</table>


Eptinezumab – Powerful, Fast and Sustained action

Eptinezumab promise

- Rapid onset of prevention by Day 1 driven by IV formulation and 100% bioavailability, addressing unmet medical need
- Strong response rate data from two phase III studies
- Strong impact on patient’s response on Quality of Life
- Good tolerability profile similar to placebo at all dosages
- Only prevention treatment available as an IV formulation
- Quarterly administration: Potentially increased compliance for improved outcome
Eptinezumab – Exciting upcoming newsflow with interesting LCM potential

Regulatory:
U.S. PDUFA action date: 21 February 2020
Expected submission in Canada (Q1 2020), EU (by end 2020), followed by submissions for approval in other regions around the world

Ongoing studies:
RELIEF study started in November 2019 (n = ~450)

There are several life cycle management opportunities

Indication
RELIEF study - “Treat & Prevent” (NCT04152083)
Assessing the efficacy of eptinezumab for acute migraine, defined as an active intercurrent migraine occurring in those patients who are candidates for preventive therapy.
Subjects will be randomized to receive a single dose of eptinezumab or placebo in a 1:1 ratio. The total study duration will be approximately 4 to 12 weeks, including up to an 8-week observation period, with clinic visits occurring on Screening, Day 0 (dosing day), and Week 4.

Other potential indications
- Medication overuse headache
- Cluster headache
- Post-concussion headache
- Other pain syndromes
Speaker: Peter Anastasiou - Executive Vice President, North America

Preparing to launch eptinezumab
Eptinezumab: Poised for success

1. Why Lundbeck is well positioned to successfully launch eptinezumab in the U.S.

2. Despite recent entrants, the migraine market still has substantial unmet need

3. Eptinezumab’s fast, powerful and sustained control in prevention of migraine as shown in clinical trials differentiates it in the marketplace

4. Eptinezumab’s profile as an infused product further differentiates it from competitors and delivers on benefits patients and physicians say they desire
Lundbeck U.S. launch success with 7 products in 10 years

Diversity of indications with customized formulations
Speed to market
Track record of trusted relationships
Value creation through life cycle management
Eptinezumab will benefit from Lundbeck’s capabilities

**Orphan/Specialty Distribution**
Xenazine, Sabril, Northera, Onfï, Abilify Maintena
- Limited patient population
- Limited number of physicians
- Fewer competitors
- Low SG&A requirements
- Specialty pharmacy distribution
- Hub model

**Large Specialist-driven/Retail**
Trintellix, Rexulti
- Huge markets
- Large number of physicians
- High pricing/payer pressure
- Substantial competition
- High SG&A requirements / DTC
- Longer IP = LCM

**Focused launch**
Concentrated number of specialists driving majority of the market
Existing IV capabilities
Experienced with medical benefit products
Support services aligned to patient needs
Lundbeck ranked #1

by patient groups **four years in a row**

PatientView Corporate Reputation of Pharma, U.S. Edition

- Patient-centricity
- Patient information
- Patient safety
- High-quality products
- Transparency in pricing
- Transparency in clinical data
- Transparency in funding
- Corporate integrity
- Quality of patient-group relationships
- “beyond the pill” services

...& **overall**
The U.S. organization has been redesigned to maximize strategic brands while leveraging synergies and reputation in neurology.

Peter Anastasiou
EVP, North America

US Chief Commercial Officer

Psychiatry Business Unit

Neurology Business Unit

Eptinezumab
PREPARING TO LAUNCH EPTINEZUMAB

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Patients are dissatisfied with previous treatments based on tolerability and lack of sustained efficacy

Oral preventives fail to meet needs of many patients: adherence, safety, tolerability issues

Up to 80% discontinue use of oral preventives within 6-12 months due to lack of efficacy and/or tolerability

Patients dissatisfied with first generation prevention options will expand the market potential

Migraine prevention market: 13.9m\(^1,2\)

Breakout of 27% treated group

<table>
<thead>
<tr>
<th>Preventive Treatments</th>
<th>% of Use(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botox</td>
<td>10%</td>
</tr>
<tr>
<td>CGRP</td>
<td>5%</td>
</tr>
<tr>
<td>Other Preventive Treatments</td>
<td>85%*</td>
</tr>
</tbody>
</table>

\(^1\)2018 ORG Migraine Market Landscape & Forecast, \(^2\)Lipton 2007, 13.9M= 62% 4+ Migraines, 38% 15+ \(^3\)2019 Truven Health Analytics

* Some patients are on combo therapy such as CGRP + Topiramate. For purpose of this analysis, patients on multiple therapies are deduped.
The overall prevention market is growing primarily driven by CGRP class

Anti-Migraine Market

5% increase in last quarter vs Q2 2019

CGRPs

21% increase in last quarter vs Q2 2019

Sources: IQVIA. Anti-Migraine market is I.N2C. Anti-Migraine Preps. Botox revenue is sourced from Allergan Q3 Earnings.
The commoditization of the S.C. CGRPs provides room for differentiation with eptinezumab

<table>
<thead>
<tr>
<th>Similar launch timing and product attributes</th>
<th>Minimally differentiated launch execution</th>
<th>A commoditized marketplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products with same indications launched within ~6 months of each other</td>
<td>15-20% of TRxs(^1) driven by free product voucher</td>
<td>82% of HCPs(^2) view current CGRPs as interchangeable</td>
</tr>
<tr>
<td>Similar efficacy results</td>
<td>Similar patient targets</td>
<td></td>
</tr>
<tr>
<td>Differences are limited to side effects and device</td>
<td>Similar patient support programs – Aimovig had a “learning curve”</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Source: IQVIA June 2019XponentPlanTrakdata
\(^2\) Source QT19RealTimeDynamic SpheronInsights (40-Minute Quantitative Online Survey n=99 Neurologists and Headache Specialists, Pediatric Specialists Screened Out)
PREPARING TO LAUNCH EPTINEZUMAB

Eptinezumab: Poised for success

1

Why Lundbeck is well positioned to successfully launch eptinezumab in the U.S.

2

Despite recent entrants, the migraine market still has substantial unmet need.

3

Eptinezumab’s fast, powerful and sustained control in prevention of migraine as shown in clinical trials differentiates it in the marketplace.

4

Eptinezumab’s profile as an infused product further differentiates it from competitors and delivers on benefits patients and physicians say they desire.
## Preparing to Launch Eptinezumab

### Eptinezumab: A specifically designed antibody targeting the CGRP ligand

<table>
<thead>
<tr>
<th>Selective binding</th>
<th>Strong binding</th>
<th>Immediate availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>High specificity for CGRP ligand</td>
<td>High affinity for CGRP ligand</td>
<td>100% bioavailability for rapid exposure</td>
</tr>
</tbody>
</table>

Eptinezumab design features that appear to allow for rapid response and efficacy that is powerful and sustained

---

Eptinezumab: fast, effective and sustained elimination of CGRP\(^1\) that delivers meaningful patient outcomes

**Fast**
Onset of prevention
Day One post-infusion

**Powerful**
≥50%, ≥75% and 100% reductions in migraine days

**Sustained**
for 3 months following a single administration and sustained or further increased with subsequent infusions

**Meaningful**
Patient improvements

- Onset of prevention starting from Day 1 post- 30 min IV administration; >50% of patients have no migraine 1 day post infusion
- 54.5% and 30.9% of patients achieved the ≥50% and ≥75% responder rates by month 1 and sustained or further increased efficacy with subsequent infusions
- Response rates either sustained or further increased with repeat quarterly IV treatments
- Clinically meaningful improvements in patient-reported Health-Related Quality of Life (HRQoL)
- Meaningful Monthly 100% responder rate (averaged over Months 1, 2 and 3)
- 30 min IV treatment translates to only 2 hours per year of patient’s time

---

\(^{1}\) Calcitonin gene-related peptide (CGRP). \(^{2}\) PROMISE 2
Eptinezumab: Poised for success

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4. Eptinezumab’s profile as an infused product further differentiates it from competitors and delivers on benefits patients and physicians say they desire
Many additional factors allow for eptinezumab to differentiate in the market

**Physicians**
Epti product profile show great acceptance and willingness to prescribe

Physicians see IV as a path to having **greater control of care and ensure proper compliance**. Physicians are also used to quarterly dosing patterns as they currently follow this for Botox

**Patients**
Patients are suffering and need preventive medications that work, and work faster

Nearly half of patients on epti felt that their migraine status was much or very much improved as early as Month 1 while **60% of patients** felt their migraine status was much or very much improved by month 6

**Specialists**
Customer base is highly specialized with neurologists and headache centers

Customer base is highly concentrated with 650 accounts writing ~50% of prescriptions and 2,000 accounts writing ~80% of prescriptions. 95% have access to IV capacity and >70% have IV capacity in-house

**Market Access**
Broad access is expected given the product covered Medical Benefit

The reimbursement process for Medical Benefit products differs from S.C. CGRPs Pharmacy Benefit products

1) Patient Global Impression of Change for patients with more than 15 migraine headache days. 2) Account mapping and market research conducted by Argon
PREPARING TO LAUNCH EPTINEZUMAB

Physicians prefer to have greater control over the total patient care and create an emotional connection

With IV infusions, MDs KNOW their patients are compliant

Increases their confidence when making subsequent treatment decisions

Eases uncertainty about therapeutic responses and eliminates doubt about compliance

- Is the patient not responding to medication?
- Was it not taken as prescribed?
- Was the drug not approved by insurance?

“IV infusions give you the comfort the patient is compliant, and compliance leads to more effective medications and better results.”

Neurologist

“If they only did what I told them to do it wouldn’t be so challenging to care for them.”

Headache Specialist

“Knowledge is power- We can help patients more when we know if they are compliant.”

Primary Care

“Being sure of compliance means you know the drug was approved and patient took it. It leads to a more productive and therapeutic relationship. They trust me, I trust them.”

PA

Source: Benefit Ladder Qualitative Research (June 2019)
Empower the right patients to ask for eptinezumab’s fast and sustained powerful prevention

87% Patients who rate efficacy as top reason for accepting prevention Rx

43% Patients who are afraid of doing something wrong with self-injection

26% Patients who prefer HCP administered treatment

Priority patient targets
- Speed of treatment and efficacy
- To be taken care of
- To have the assurance of correctly administering
- To be free of thinking of medicine daily, monthly

She wants more than freedom from pain.

“I wish I could worry less and live more”

Source: Migraine Patient Preferences Study Dec 2017
**PREPARING TO LAUNCH EPTINEZUMAB**

~650 accounts are driving 50% of the migraine prevention volume with almost all having IV access

<table>
<thead>
<tr>
<th>~ 650</th>
<th>95%</th>
<th>80%</th>
<th>83%</th>
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<tr>
<td>Headache/ Pain Centers, Neurology Practices, and Hospitals</td>
<td>Have IV access&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Have prescribed an IV to their patients for migraine&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Have prescribed Botox to their patients for migraine&lt;sup&gt;1&lt;/sup&gt;</td>
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See an average of 200-300 migraine patients per month. Often see patients at a quarterly cadence.

<sup>1</sup> IQVIA Xponent & claims data
PREPARING TO LAUNCH EPTINEZUMAB

Medical vs. pharmacy benefit dynamic

**Retail S.C. Drugs: Pharmacy Benefit**
- CGRP retail products managed under a pharmacy benefit
- Tight monitoring limits physician choice in prescribing through more utilization mgmt.
- Rebating is more common with pharmacy benefit products due in part to electronic capture of utilization
- Significant patient cost sharing

**Office Infusion Drugs: Medical Benefit**
- Eptinezumab will be managed mainly under a medical benefit
- Less utilization management
- Payer rebating is less common
- Fewer plans require patient cost sharing

Eptinezumab access process will resemble Botox more than CGRPs
- Botox is also administered by a healthcare professional and managed via medical benefit
PREPARING TO LAUNCH EPTINEZUMAB

Setting expectations: while there are many advantages with medical benefit products, a short-term challenge exists

As with all physician administered drugs, eptinezumab will have a Not Otherwise Classified (NOC) code or miscellaneous J code for up to a year*

All medical providers use standardized coding systems when submitting claims for reimbursement of services and supplies

J codes are used for drugs for physician administered products

NOC codes can create provider administration burden and perception of payment uncertainty and delays, but most are accustomed to this with new products

Payer coverage criteria also takes time to be established, which may cause some HCPs to be more conservative in their uptake at launch

*CMS has announced quarterly opportunities to apply and receive codes for drugs. Eptinezumab could receive a permanent J code earlier than Q1 2021
Setting expectations: data for physician administered products are less transparent than retail (e.g. Botox)

Typical sources of data will only showcase a portion of the product performance

Sources: IQVIA NSP and Allergan 10-K. Revenue is for all non-cosmetic sales, not just for Migraine
Global reach

Already planning Canada/EU filings
Preparing the path for China, Japan and emerging markets

Market Access
Initiate study to facilitate EU market access
Building insights and relationships to prepare global markets

Expanding eptinezumab
Drive ‘Treat & Prevent’ study
Define and pursue future indications
Wheels are in motion for global roll-out
Eptinezumab: Poised for success
- In summary

1. Lundbeck is well positioned to successfully launch eptinezumab

2. The migraine market still has substantial unmet need

3. Eptinezumab has fast, powerful and sustained control in prevention of migraine

4. Eptinezumab’s profile as an infused product further differentiates it
What makes migraine unique?
Migraine

Presenter
Dr. Messoud Ashina

1. Health impact/burden
2. Migraine symptoms
3. Migraine subtypes: episodic and chronic
4. Management: acute and preventive treatment
5. Patients eligible for preventive treatment
6. Unspecific migraine preventatives
7. Rationale behind CGRP
8. Discovery and human experiments
9. First proof of concept small molecules CGRP receptor antagonists
10. Monoclonal antibodies
11. Summary of phase 2 studies
12. Summary of phase 3 studies
13. Summary on safety & tolerability
14. Onset of effect
### Executing on *Expand and Invest to Grow* - In summary

<table>
<thead>
<tr>
<th>Strategic brands up 29%</th>
<th>New studies with brexipiprazole</th>
<th>Acquisitions of Abide and Alder moving into migraine, Tourette syndrome and pain</th>
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<td>Trintellix approved in Japan, Rxulti launch in Europe</td>
<td>Portfolio Management Board and closer collaboration between Commercial and R&amp;D</td>
<td>Three FiH-studies and one PoC-study with internal projects; clinical pipeline now containing 11 compounds</td>
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Thank you!