

Investor & Analyst presentation

First half 2018 – August 2018



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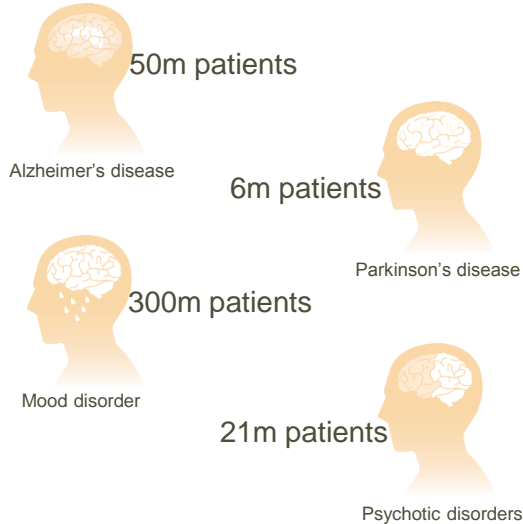
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Lundbeck in brief

DISEASE AREAS



~\$40bn

KEY PRODUCTS

~\$1.5bn



GLOBAL PRESENCE

We are headquartered in Denmark and present in 55 countries



55

REVENUE

~60% of our revenue is generated in North America



~60%



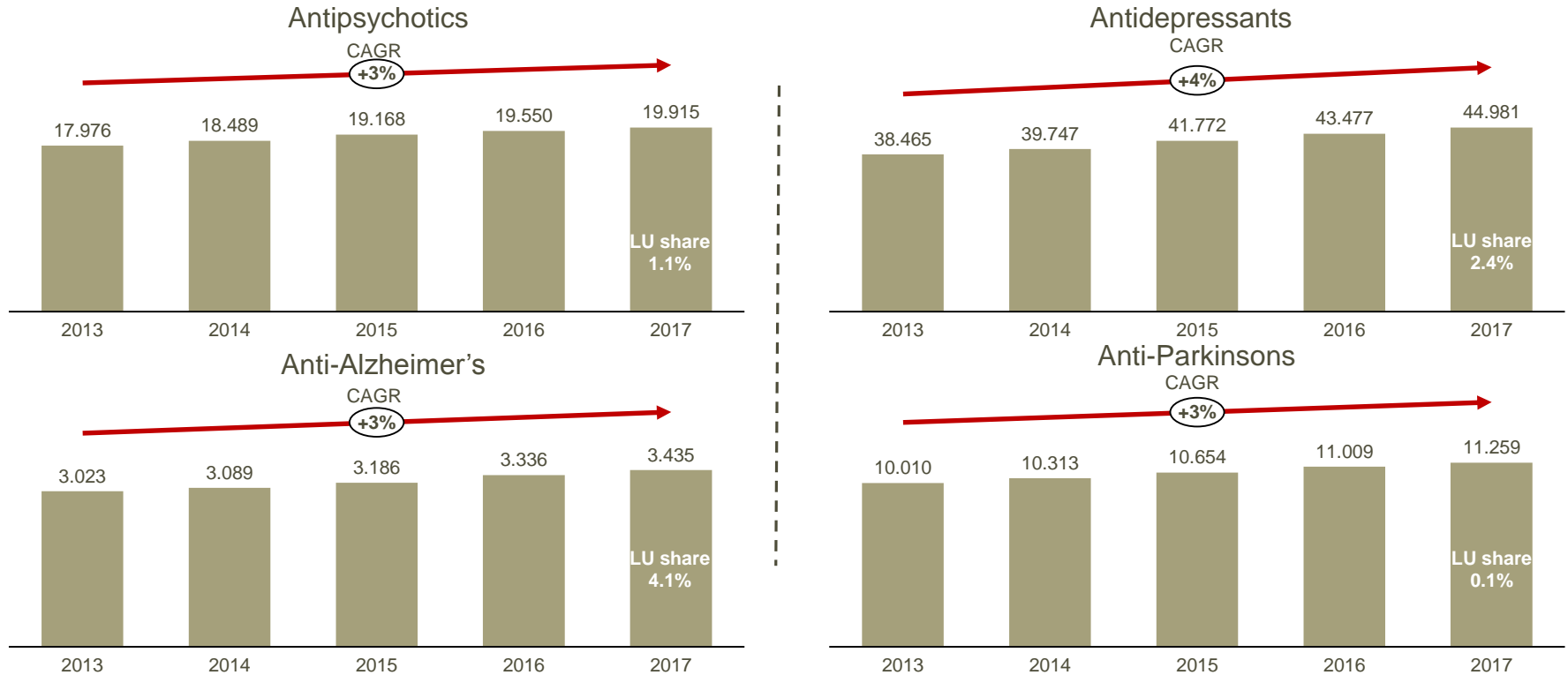
Our strategy for a
FOCUSED LUNDBECK
sets the direction
for our future success

Four diseases

Independent drug
development and
commercialization

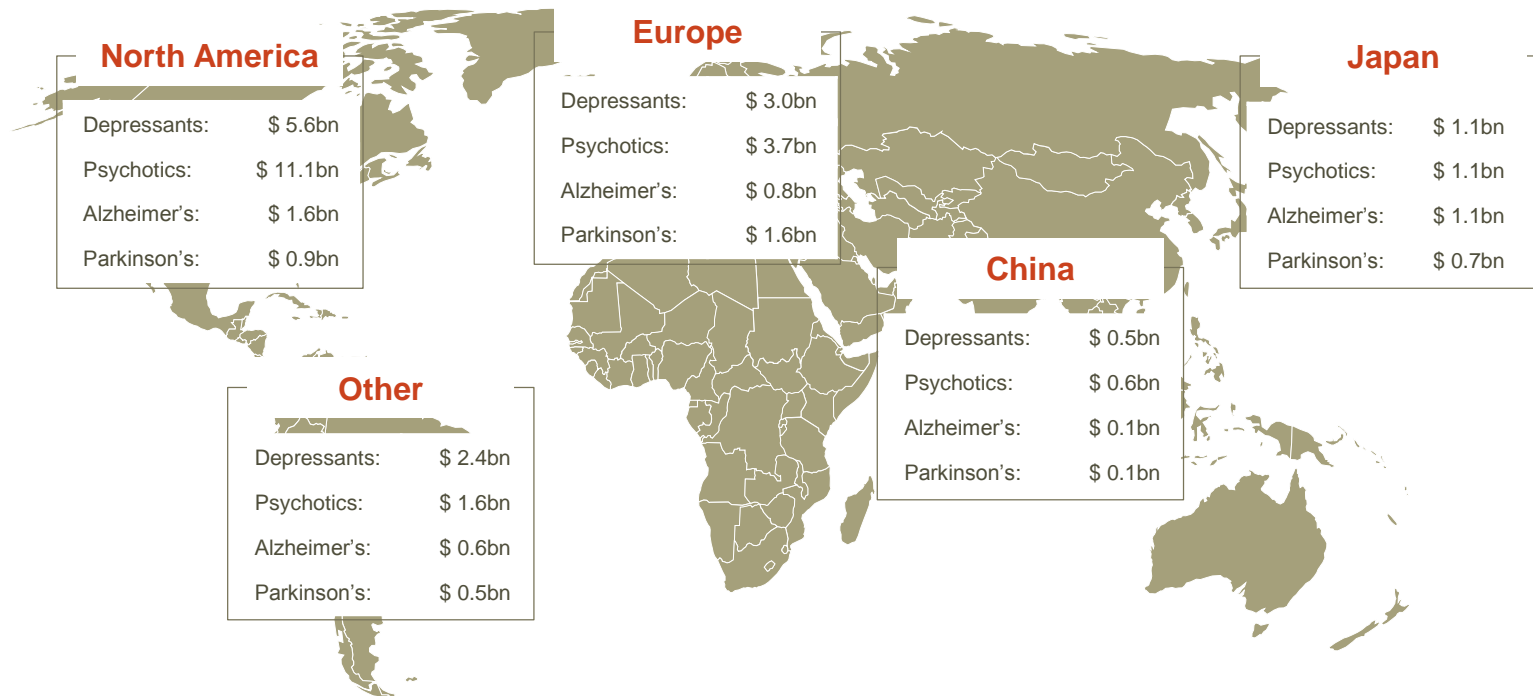
Profitable growth

Volume growth in our four focus disease areas



Source: IMS Health Analytics Link 2017 (Audited sales). Values are in standard units. Lundbeck share represents Lundbeck sales only

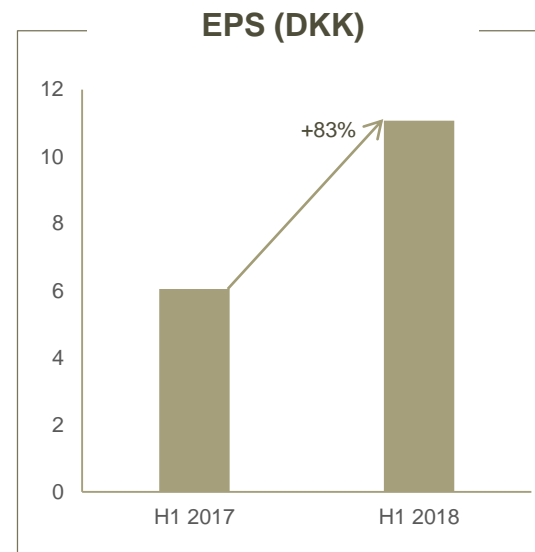
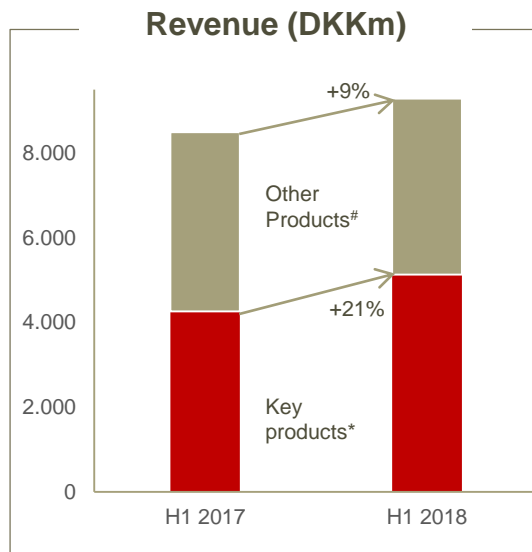
Four focus disease areas that represent a USD ~40bn opportunity



Source: IMS Health Analytics Link 2017 (Audited sales)

Key product growth drives top and bottom line

- ★ **Revenue:** Up 9% (14% in L.C.) to DKK 9.3 billion in H1 2018
- ★ **Hedging:** Contributed DKK 277 million
- ★ **Key products*:** Up 21% to DKK 5.1 billion representing 55% of revenue
- ★ **EBIT:** Up 46% to DKK 3.0 billion. EBIT margin significantly improved to 32.4%, but positively impacted by hedging gains
- ★ **EPS:** Up 83% to DKK 11.07
- ★ **FY2018:** Guidance revised

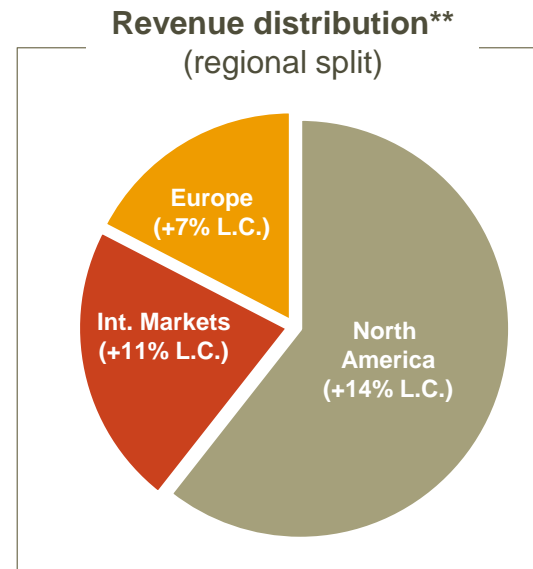
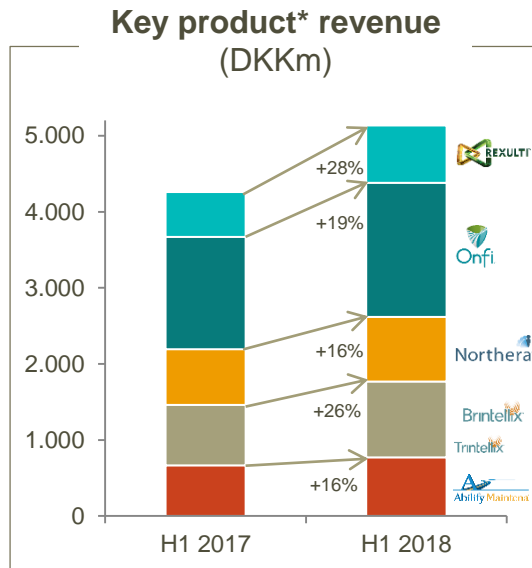


#) Includes Other revenue and effects from hedging

*) Abilify Maintena, Brintellix/Trintellix, Northera, Onfi and Rexulti

Solid revenue growth of 9% to DKK 9.3 billion in H1 2018 – in local currencies growth reached 14%

- ★ **Key products*** grew by DKK 874 million or 21% (33% in L.C.) with all products showing double digit growth in H1 2018
- ★ Both **North America** and **International Markets** see significant currency headwind
- ★ Growth in all regions in local currencies
- ★ Largest markets are the U.S., Canada, China, France, Italy, Japan and Spain

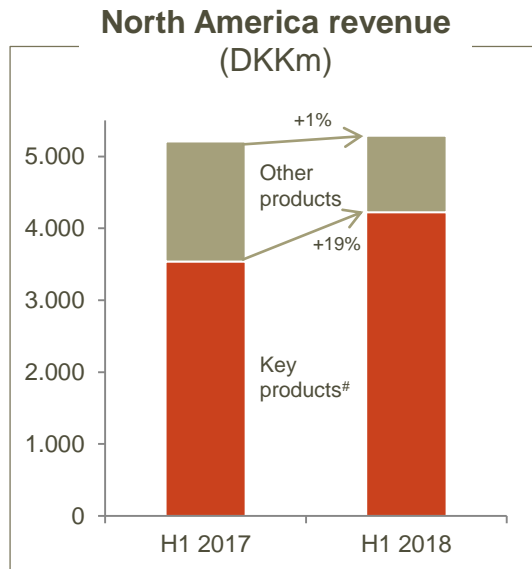


*) Ability Maintena, Brintellix/Trintellix, Northera, Onfi and Rexulti

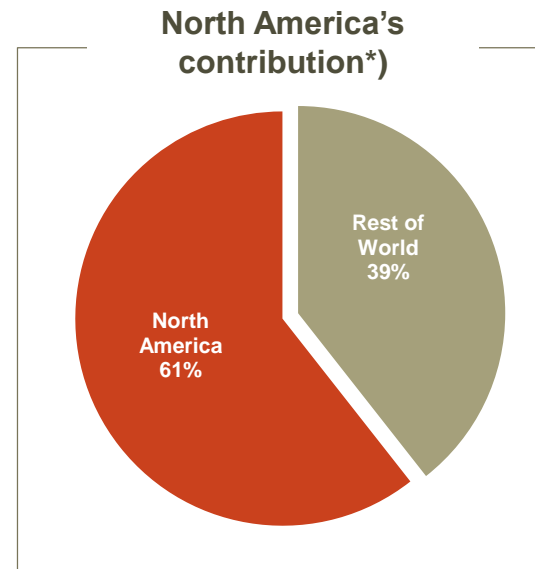
**) Excluding Other revenue and effects from hedging

North America up 1% driven by Trintellix, Rexulti, Northera and Onfi – currency headwind had significant negative impact

- ★ North America grew 1% (14% in L.C.) to DKK 5,287 million in H1 2018
- ★ Key products# grew 19% and constituted 80% of revenue in H1 2018
- ★ For FY2018, North America is expected to show growth in local currencies despite LOE on Onfi towards the end of the year



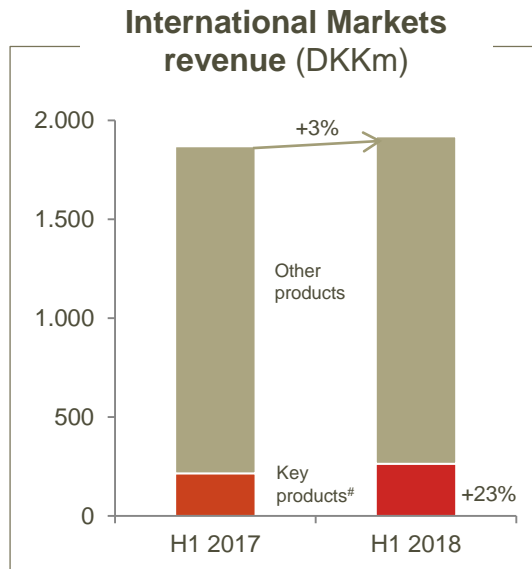
#) Abilify Maintena, Northera, Onfi, Rexulti and Trintellix



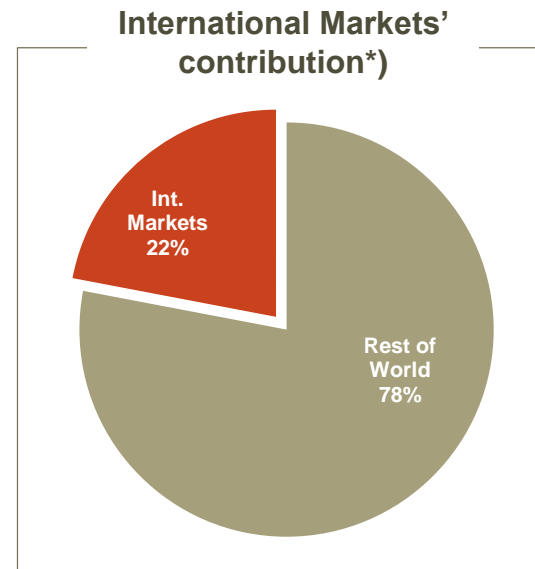
*) Excluding Other revenue and effects from hedging

International Markets grew 3% in H1 2018 – up 11% in local currencies

- ★ International Markets increased 3% (11% in L.C.) to DKK 1.9 billion in H1 2018
- ★ Positive impact from stocking of DKK ~150 million
- ★ Key products# grew by 23% and constituted 14% of sales
- ★ Market exclusivity for Lexapro extended by two years in Japan
- ★ Main markets are Brazil, China, Japan and South Korea
- ★ For FY2018, International Markets is expected to show growth in local currencies



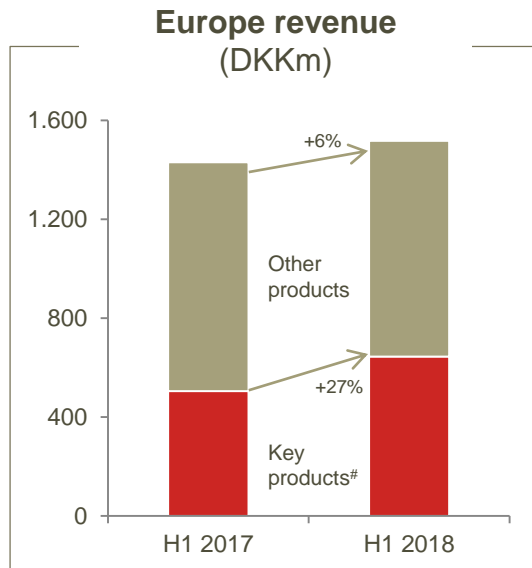
#) Abilify Maintena, Brintellix and Rexulti



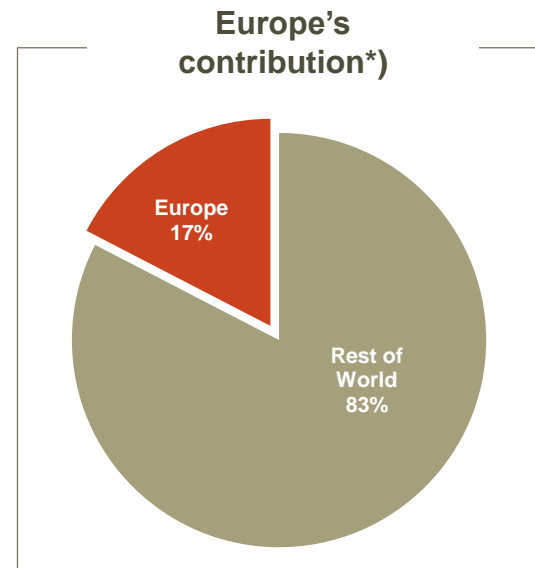
*) Excluding Other revenue and effects from hedging

Europe grew 6% in H1 2018 driven by Abilify Maintena and Brintellix – up 7% in local currencies

- ★ Europe grew 6% to DKK 1.5 billion in H1 2018
- ★ Key products[#] grew 27% and constituted 42% of sales
- ★ Largest markets are France, Italy and Spain
- ★ Continued strong performance for Brintellix, especially in France, Italy and Spain
- ★ Profitability significantly improved
- ★ Rxulti approved in Europe with launch commencing in H1 2019
- ★ For FY2018, Europe is expected to show growth in local currencies



[#]) Abilify Maintena and Brintellix



^{*}) Excluding Other revenue and effects from hedging

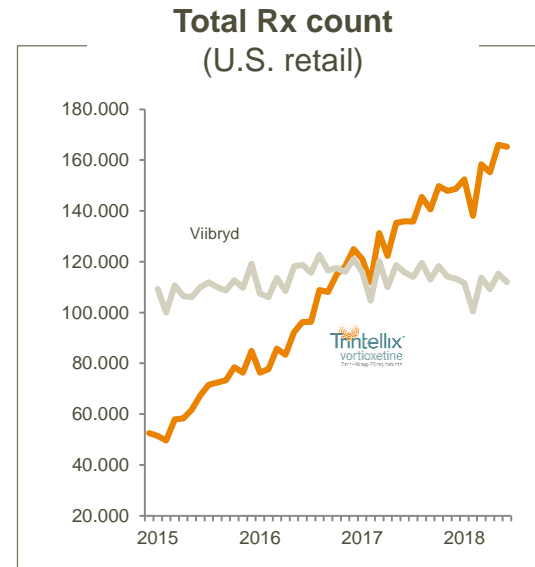
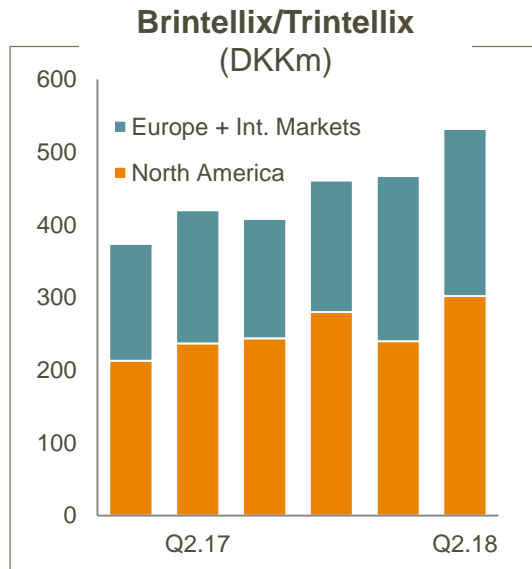
Mood disorders

- ★ 300 million people worldwide are estimated to live with depression
- ★ Cognitive symptoms (difficulty concentrating, forgetfulness and/or indecisiveness) appears 94% of the time during major depressive episodes
- ★ The WHO lists depression as the leading disability worldwide
- ★ Majority of patients do not respond to initial antidepressant therapy
- ★ Value: USD 12.6 billion (2017)



Brintellix/Trintellix grew 26% to DKK 999 million in H1 2018 – in local currencies the growth was 36%

- ★ **North America** grew by 20% (34% in L.C.) to DKK 542 million
- ★ **Europe and International Markets** grew 33% (40% in L.C.) combined to DKK 457 million
- ★ Largest markets are the U.S. Brazil, Canada, France, Italy, and Spain
- ★ Growth mainly driven by France, Italy, Spain and the U.S.
- ★ Brintellix continues to gain both volume and value share
- ★ **PDUFA** on 21 October regarding **TESD** in patients with depression

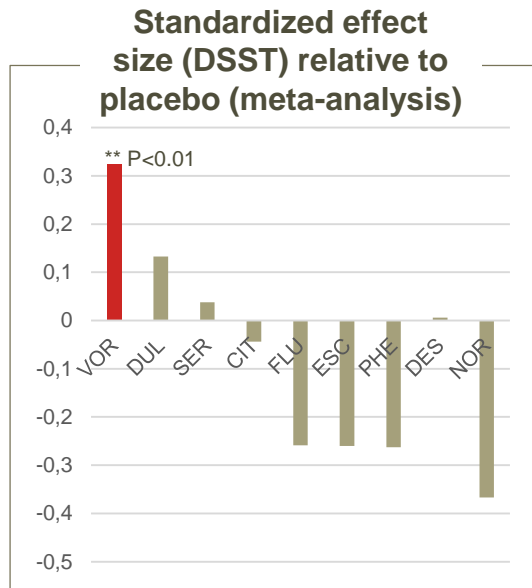


Source: Symphony Health Solutions/Bloomberg (monthly data ending 6/2018)

PDUFA: Prescription Drug User Fee Act (FDA).
TESD: Treatment-Emergent Sexual Dysfunction

Trintellix is the first FDA-approved treatment for MDD to have data on processing speed, an aspect of cognitive function that is impaired in many patients with MDD

- ★ Trintellix U.S.-label updated to include data showing improvement in processing speed, an important aspect of cognitive function
- ★ Comparative studies have not been conducted to demonstrate a therapeutic advantage over other antidepressants on the DSST
- ★ MDD is a multidimensional disorder consisting not only of mood, but also physical and cognitive symptoms
- ★ Cognitive symptoms in MDD are highly prevalent and persistent even after treatment



Baune BT, et al. *Int J Neuropsychopharmacol*; 2018 Feb 1;21(2):97-107

The prevalence of cognitive symptoms in MDD

Acute phase – 94%

Cognitive problems dominate the course of depression and were present for up to 94% of the time during depressive episode

Remission – 44%

Even patients thought to be in remission, cognitive symptoms were present in depressed patients for an average of 39-44% of the time

Conradi HJ et al. *Psychol Med* 2011; 41: 1165-1174

Further potential strengthening of Trintellix U.S. label

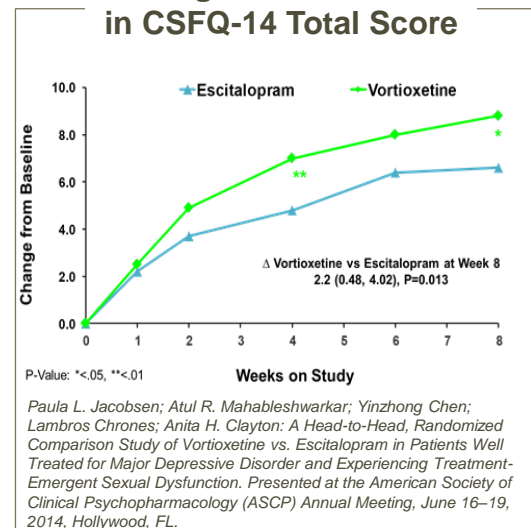
- ★ FDA accepted sNDA for Trintellix for Treatment-Emergent Sexual Dysfunction (TESD) in patients with depression
- ★ PDUFA on 21 October 2018
- ★ The prevalence of TSED reach 25-80% (SSRIs) and 40-80% (SNRIs)
- ★ Sexual dysfunction ranked as the most bothersome adverse event (AE), followed by drowsiness, weight gain, and insomnia

Completed studies in TSED

Study #1 (NCT01364649)	Study #2 (NCT02932904)
Completed enrollment:	
450 patients included	352 healthy volunteers
Intervention:	
10-20mg vortioxetine, 10-20mg escitalopram and placebo	10-20mg vortioxetine, 20mg paroxetine and placebo
Treatment duration:	
8 weeks	8 weeks
Primary outcome measures:	
Change From Baseline in the CSFQ-14 Total Score ¹	

CSFQ: Changes in Sexual Functioning Questionnaire

Change from baseline in CSFQ-14 Total Score



Serretti, A: Treatment-Emergent Sexual Dysfunction Related To Antidepressants – A Meta-Analysis. *Journal of Clinical Psychopharmacology*. Vol. 29, No. 3, June 2009
 Kennedy, SH: Sexual Dysfunction, Depression, and the Impact of Antidepressants. *Journal of Clinical Psychopharmacology*. Vol. 29, No. 2, April 2009
 Clayton AH, Montejo AL. Major depressive disorder, antidepressants, and sexual dysfunction. *J Clin Psychiatry*. 2006;67 Suppl 6:33-37.

Psychotic disorders

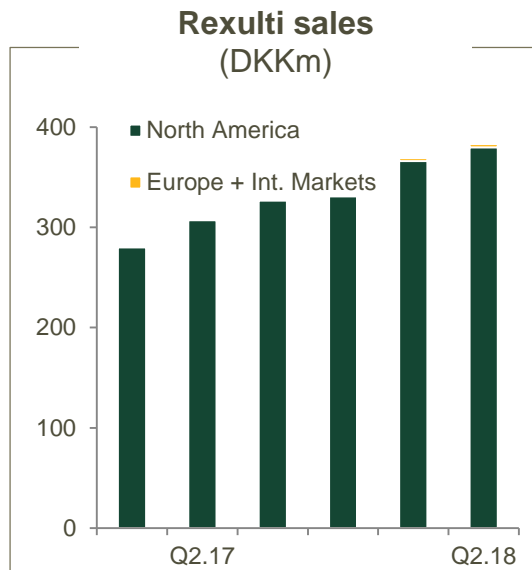
- ★ The WHO estimates that over 21 million people suffer from schizophrenia
- ★ Schizophrenia is among the most financially costly illnesses in the world
- ★ The disease is marked by positive symptoms (hallucinations and delusions) and negative symptoms (blunted emotions and social withdrawal)
- ★ Around 30% of patients with schizophrenia have inadequate response to antipsychotics
- ★ Current therapies are sub-optimal
- ★ Value: USD 18.8 billion (2017)



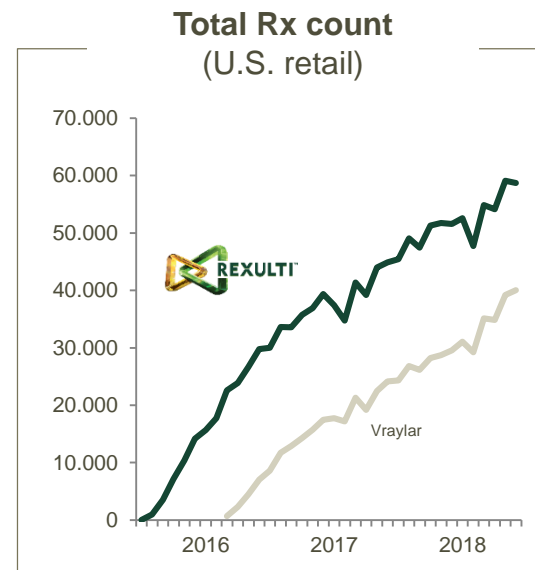
Rexulti grew 28% to DKK 752 million in H1 2018 – in local currencies the growth was 44%

- ★ **Rxulti** approved in Europe
- ★ Recently also approved in Honduras and Saudi Arabia
- ★ Rexulti has 11.3% value share (U.S.)
- ★ Third study in **AAD** commenced
- ★ Pivotal programme in **bipolar mania** to conclude Q1 2019
- ★ PoC study in **PTSD** to conclude Q1 2019
- ★ Additional LCM activity progressing

AAD: Agitation in Alzheimer's disease; PoC: Proof of Concept; PTSD: Post-Traumatic Stress Disorder; LCM: Life-Cycle Mgmt.



Lundbeck's share of revenue.
NOTE: Outside North America, Rexulti has only been launched in Australia



Source: Symphony Health Solutions/Bloomberg (monthly data ending 6/2018)

Comprehensive LCM programme ongoing for brexpiprazole for further product value expansion

Brexpiprazole

- Several clinical programmes ongoing to address unmet medical needs and aiming for product value maximation

Bipolar I disorder

- Two studies to demonstrate the efficacy in acute treatment of manic episodes, with or without mixed features, in subjects with a diagnosis of Bipolar I disorder (n = 320 in both studies) (NCT03257865, NCT03259555)
- Evaluating the safety and tolerability in the treatment of subjects with Bipolar I disorder (n = 384) (NCT03287869)

Agitation in Alzheimer's

- Programme to compare the efficacy of 2 doses (2 mg and 3 mg) of brexpiprazole with placebo in subjects with agitation associated with dementia of the Alzheimer's type (n = 225) (NCT03548584, NCT03594123 (12-week extension study))

PTSD

- Evaluating the safety, efficacy and tolerability of brexpiprazole (with placebo) as monotherapy or combination therapy (Zoloft) in adults with PTSD (n = 332) (NCT03033069)

Adolescents

- To determine the safety and efficacy of brexpiprazole monotherapy in the treatment of adolescents with schizophrenia (n = 387) (NCT03198078)
- To further characterize the long-term safety and tolerability of brexpiprazole in adolescents with schizophrenia (n = 350) (NCT03238326)

Upcoming events

- Headline results from the PoC study in PTSD to be reported in Q1 2019
- Headline results from the pivotal programme in Bipolar disorder to be reported in Q1 2019

Brexpiprazole pivotal programme ongoing in acute manic episodes associated with Bipolar I disorder

Expected brexpiprazole profile:

- ★ Established efficacy and treatment of bipolar I disorder
- ★ Favorable tolerability profile over SoC (e.g., improved metabolic profile, fewer AEs including low frequency of sedating and activating side effects might support improved functioning and ability to work)
- ★ Expected completion in Q1 2019

The studies

Study #1
(NCT03259555)

Study #2
(NCT03257865)

Estimated enrollment: 320 adult patients in each study

Intervention: 2-4 mg brexpiprazole and placebo

Treatment duration: 21 days

Primary outcome measures: change from baseline in YMRS score¹

Study start: September 2017

6-month safety study:
Enrolling completers from Study #1 and #2

Bipolar disorder

- ★ More than 6 million affected in the U.S.
- ★ Low rate of diagnosis (45%)
- ★ A disease with high add-on and switch rates indicating need for new treatment options
- ★ Patients in treatment spent 44% of their time being ill over a 9-year period²
- ★ Bipolar disorder represents around one-third of the use of atypical antipsychotics

1) Young-Mania Rating Scale (YMRS) Score

2) A. Forte et al. / Journal of Affective Disorders 178 (2015) 71–78



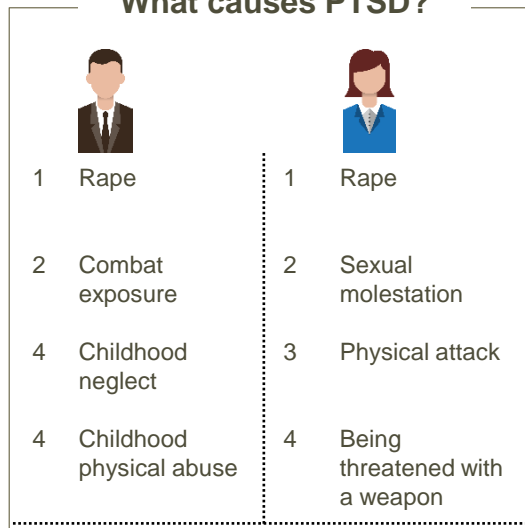
Brexpiprazole in a Proof-of-Concept study in Post-traumatic Stress Disorder (PTSD)

- ★ 4-arm, 12-week trial using 1-3 mg of brexpiprazole*
- ★ Monotherapy or in combination with sertraline
- ★ ~330 patients to be enrolled
- ★ Primary endpoint: Change from baseline in the CAPS-5 total score#)
- ★ Study started in January 2017 with expected completion in Q1 2019

PTSD

- ★ ~8.6m American adults affected¹⁾, but ~80% is undiagnosed
- ★ Growing economic and social burden to care for people with PTSD
- ★ Inadequate response with FDA approved SSRIs sertraline and paroxetine
- ★ Polypharmacy the norm

What causes PTSD?



1) <http://www.cohenveteransbioscience.org/post-traumatic-stress/>
US Census Bureau. Annual estimates of the resident population by sex and selected age groups for the United States: April 1, 2010 to July 1, 2011 (NC-EST2011-02). 2012.
<http://www.census.gov/popest/data/national/asrh/2011/index.html>.

*) NCT03033069

#) Clinician-Administered PTSD Scale for DSM-5 (CAPS-5)



First pivotal study using Lu AF35700 in Treatment Resistant Schizophrenia (TRS) on track

- ★ Unique mode of action. In contrast to current treatment, antipsychotic effect at **low D₂ blockade**
- ★ Combined D₁/D₂, 5-HT_{2A} and 5-HT₆ profile gives good activity combined with a **benign tolerability profile**
- ★ Very **long half-life** leads to reduced risk of relapse

Treatment Resistant Schizophrenia

- ★ Around 1/3 of schizophrenia patients are treatment resistant
- ★ Only clozapine approved for TRS
- ★ Large unmet medical need



Clinical programme

- ★ Three studies in healthy people and one in patients with schizophrenia are concluded¹⁾
- ★ The first pivotal study (*DayBreak I*) commenced in March 2016²⁾
- ★ Other key studies ongoing:
 - ★ Long-term safety study³⁾
 - ★ Cardiac repolarization⁴⁾
 - ★ ED or LD TRS (*Anew*)⁵⁾

1) [Clinicaltrials.gov identifier: NCT02202226](https://clinicaltrials.gov/ct2/show/study/NCT02202226)

2) [NCT02717195](https://clinicaltrials.gov/ct2/show/study/NCT02717195). 3) [NCT02892422](https://clinicaltrials.gov/ct2/show/study/NCT02892422). 4) [NCT02901587](https://clinicaltrials.gov/ct2/show/study/NCT02901587).

5) [NCT03230864](https://clinicaltrials.gov/ct2/show/study/NCT03230864) (early-in-disease (ED) or late-in-disease (LD) treatment-resistant schizophrenia)

Set-up in first study (*DAYBREAK I*) in pivotal programme using Lu AF35700 in Treatment Resistant Schizophrenia

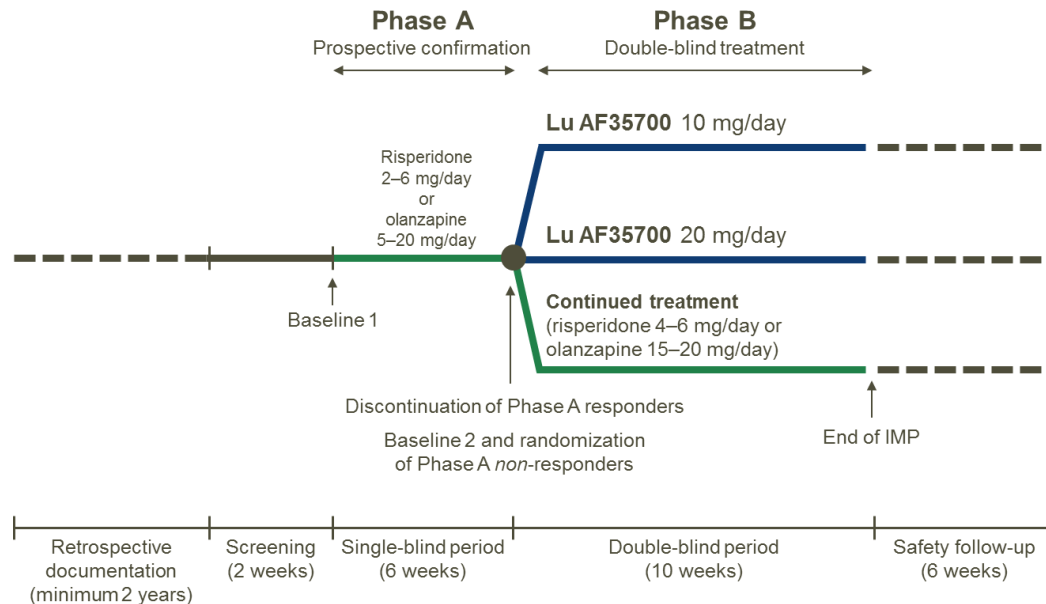
- ★ Oral, once daily
- ★ Finalized recruiting approximately 1,000 patients
- ★ Expected completion by Q4 2018

Primary endpoint

- ★ Change in PANSS total score

Secondary endpoints

- ★ Clinical Global Impression Severity scale (CGI-S)
- ★ Personal and Social Performance (PSP) total score



*) NCT02717195

Major clinical programme ongoing with Lu AF35700 – first results to be reported in Q4 2018

Lu AF35700

- For the treatment of treatment-resistant schizophrenia (TRS) which represents a major unmet medical need
- Antagonist at dopaminergic, serotonergic, and α adrenergic receptors. Unlike all currently available antipsychotics, Lu AF35700 has higher affinity for the human dopamine D₁ receptor than it has for the human dopamine D₂ receptor

Clinical studies in TRS

- *DAYBREAK I* evaluates the efficacy of 10 and 20 mg/day of Lu AF35700 on schizophrenia symptoms in patients with treatment-resistant schizophrenia (n = 964) (NCT02717195)
- *ANEW* evaluates the efficacy of 10 mg/day Lu AF35700 on symptoms of schizophrenia in patients with early-in-disease or late-in-disease treatment-resistant schizophrenia (n = 285) (NCT03230864)

Supportive clinical studies

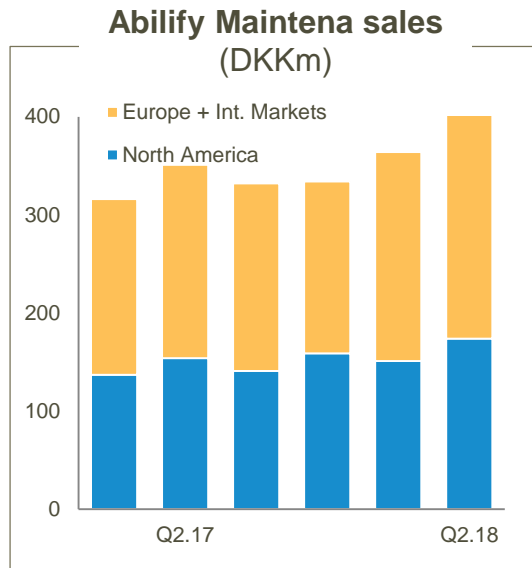
- Study to evaluate the pharmacokinetics of Lu AF35700 after a single dose tablet to subjects with renal impairment and compare that with healthy subjects (n = 32) (NCT03241147)
- Study to investigate the effect of multiple doses of the strong P450 enzyme inhibitor itraconazole on the pharmacokinetics of Lu AF35700 in healthy subjects (n = 23) (NCT03103646)
- Study to establish bioequivalence of Lu AF35700 between the clinical formulation and the commercial formulation for three tablet strengths; 5, 10 and 20 mg (n = 90) (NCT03394482)

Upcoming events

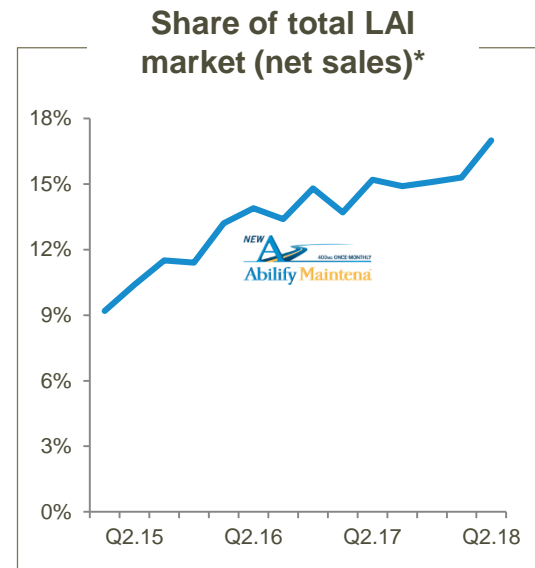
- Communicate headline results from first study (*DAYBREAK I*) in the pivotal programme during Q4 2018

Abilify Maintena grew 16% to DKK 771 million in H1 2018 – in local currencies the growth was 22%

- ★ **Europe and International Markets** grew 19% (21% in L.C.) combined to DKK 446 million
- ★ **North America** up 12% (24% in L.C.) to DKK 325 million
- ★ Growth driven by Australia, Canada, France, Spain and the U.S.
- ★ Largest markets are Australia, Canada, France, Spain and the U.S.
- ★ Market share increasing - >20% volume share (LAI retail) in most markets
- ★ **Total LAI market** reached USD 2.2 billion (+13%) in H1 2018



Lundbeck's share of revenue



*) Based on quarterly reports from Lundbeck, Otsuka, Alkermes and Johnson & Johnson

LAI: Long-acting injectable anti-psychotics

Alzheimer's disease

- ★ 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
- ★ Value: USD 4.5 billion (2017)



Brexpiprazole in pivotal programme for the treatment of agitation in Alzheimer's



Clinical programme

- ★ Two studies in the pivotal programme finalized
- ★ A third study commenced In June 2018 following conclusions from a FDA Type C meeting, where...
 - ★ ...one study was considered positive and one study was considered supportive by the agency
- ★ *Fast Track* designation granted February 2016

Agitation in Alzheimer's (AAD)

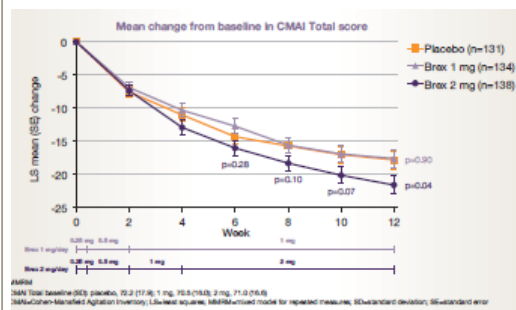
- ★ >20% of individuals in a community setting and >50% of nursing home residents with dementia have agitation
 - ★ 1.5-2m dementia patients in the U.S. with agitation / aggression
 - ★ No FDA approved medication
- Associated with:**
- ★ Increased caregiver burden
 - ★ Decreased functioning
 - ★ Earlier nursing home placement



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

- ★ Brexpiprazole 2 mg/day showed a statistically significant improvement over placebo on the primary efficacy endpoint
- ★ On the key secondary efficacy endpoint, change from baseline to Week 12 in CGI-S score, numerical improvement was observed for brexpiprazole 2 mg/day from Week 6 and was sustained up to Week 12, although statistical significance was not reached
- ★ No new safety signals were observed

Primary endpoint



Efficacy and safety of fixed-dose brexpiprazole for the treatment of agitation in Alzheimer’s type dementia: a randomized, double-blind, fixed-dose, 12-week, placebo-controlled global clinical trial
George T. Grossberg, Eva Kohegyi, Victor Mergel, Joan Amatniek, Mette Krog Josiassen, Didier Meulien, Mary Hobart, Raymond Sanchez, Margaretta Nyilas, Mary Slomkowski, Ross A. Baker, Robert McQuade, Jeffrey Cummings

- 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 40th Annual Meeting of the American Association for Geriatric Psychiatry (AAGP), Honolulu, Hawaii, 15–18 March 2018

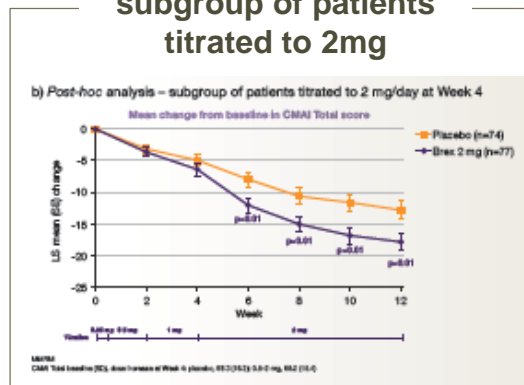
Study I (NCT01862640)

- ★ N = 433 patients (recruited from Europe, Russia, Ukraine and the U.S.)
- ★ Male or female, aged 55-90 years
- ★ 1 mg, 2 mg and placebo
- ★ 12 weeks’ treatment duration
- ★ CMAI¹⁾: 2 mg statistically superior to placebo
- ★ CGI-S²⁾: 2 mg not statistically superior to placebo

Cummings: “Efficacy and safety of flexibly-dosed brexpiprazole for the treatment of agitation in Alzheimer’s type dementia” (AAGP2018)

- ★ Primary efficacy endpoint (CMAI) were numerically favorable for flexibly-dosed brexpiprazole (0.5–2 mg/day) over placebo, but not statistically significant
- ★ Brexpiprazole 2 mg/day showed improvement for both the primary and key secondary efficacy endpoints (post-hoc analyses, $p \leq 0.01$).
- ★ The results suggest that brexpiprazole 2 mg/day may be an effective, safe, and well-tolerated new treatment for agitation in Alzheimer’s dementia

Post-hoc analysis – subgroup of patients titrated to 2mg



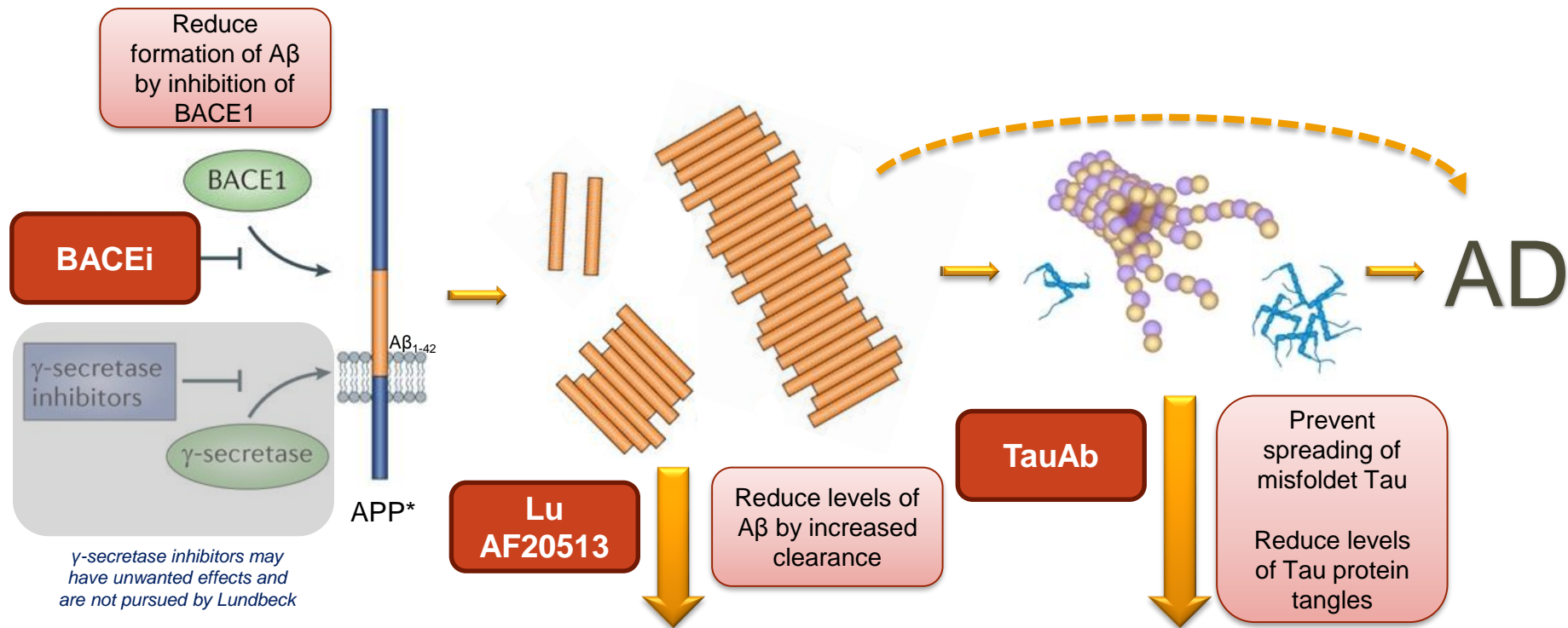
Efficacy and safety of flexibly-dosed brexpiprazole for the treatment of agitation in Alzheimer’s type dementia: a randomized, double-blind, flexibly-dosed, 12-week, placebo-controlled global clinical trial
Jeffrey Cummings, Eva Kohegyi, Victor Mergel, Joan Amatniek, Mette Krog Josiassen, 3 Didier Meulien, 3 Mary Hobart, Raymond Sanchez, Margareta Nyilas, 2 Mary Slomkowski, 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 40th Annual Meeting of the American Association for Geriatric Psychiatry (AAGP), Honolulu, Hawaii, 15–18 March 2018

Study II (NCT01922258)

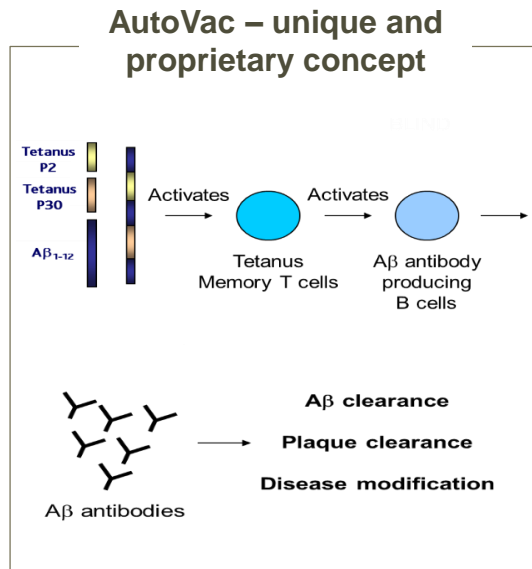
- ★ N = 270 patients (from 62 sites in Europe and North America)
- ★ Male or female, aged 55-90 years
- ★ Flexible dose: 0.5-2 mg
- ★ 12 weeks’ treatment duration
- ★ CMAI¹⁾: 0.5-2 mg not superior to placebo
- ★ CGI-S²⁾: 0.5-2 mg superior to placebo

Lundbeck is active in the investigation of various novel treatment concepts in Alzheimer's



Lu AF20513 – an active immunotherapy targeting β -amyloid

- ★ Lu AF20513 induce specific antibodies against A β using AD patients' own immune system
- ★ Formed antibodies binds to and enhances the clearance of A β
- ★ Reduce induction of Tau pathology
- ★ Lu AF20513 has demonstrated to be immunogenic in animal models without activation of A β specific T-cells ► low risk of auto-immunogenicity
- ★ Co-developed with Otsuka



Study design*)

- ★ Open-label, dose escalation study
 - ★ 35 patients from centers in Europe
 - ★ Patients with mild Alzheimer's (MMSE 19-26)
 - ★ Eight injections of Lu AF20513
- Purpose:**
- ★ Evaluate safety and tolerability
 - ★ Measure A β -specific antibody titer

*) NCT02388152

Lu AF20513 to enter proof of concept-study during H1 2019

Lu AF20513

- An active vaccine inducing high affinity polyclonal antibodies that target beta-amyloid (“Abeta”), for the potential injectable prevention of progression of Alzheimer's dementia

Ongoing activities

- Open label study to determine if multiple immunizations with Lu AF20513 is tolerable and safe in patients with mild Alzheimer's disease (n = 50) (NCT02388152)
- Investigating if subjects are generating antibodies

Upcoming events

- PoC study expected to commence in H1 2019

Parkinson's disease

- ★ Approximately 6 million patients are estimated to be affected by Parkinson's
- ★ The prevalence of Parkinson's in the U.S. will double by the year 2040 (compared to 2010)
- ★ Many Parkinson's patients also suffer from disease related non-motor symptoms such as:
 - ★ Low blood pressure when standing up; mood disorders; sensory problems; sleep disorders; loss of sense of smell, constipation, cognitive issues
- ★ Value: USD 4.0 billion (2017)



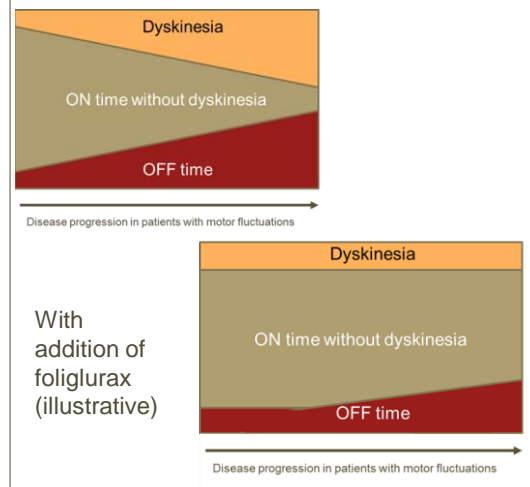
Foliglurax – an interesting new pipeline asset currently in PoC testing in Parkinson's patients

Foliglurax (PXT002331)

- ★ Increase activity of a specific glutamatergic target (mGluR4)
- ★ Symptomatic treatment of *OFF*-time in Parkinson's and levodopa induced dyskinesia
- ★ Strong IP
- ★ Global rights to foliglurax and full control of asset
- ★ Phase II started in July 2017
 - ★ Two active arms + placebo (BID)
 - ★ ~165 patients (Europe)
 - ★ Change in awake *OFF* time based on subject diary entries

1) NCT03162874

Levodopa-induced dyskinesia



Modified based on: Jankovic, *Mov. Disorder* 2005,

Motor complications of levodopa

- ★ PD-LID is the most important unmet medical need after disease modification in Parkinson's²⁾
- ★ 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
- ★ Once established, PD-LID is difficult to treat

PD-LID: Parkinson's Disease – Levodopa-Induced Dyskinesia
2) Datamonitor

Foliglurax is an innovative and highly attractive phase II compound being developed for symptomatic treatment of Parkinson's disease

Foliglurax

- A small-molecule positive allosteric modulator of group III metabotropic glutamate receptor 4 (mGluR4 PAM), for the potential oral treatment of Parkinson's disease

Ongoing activities

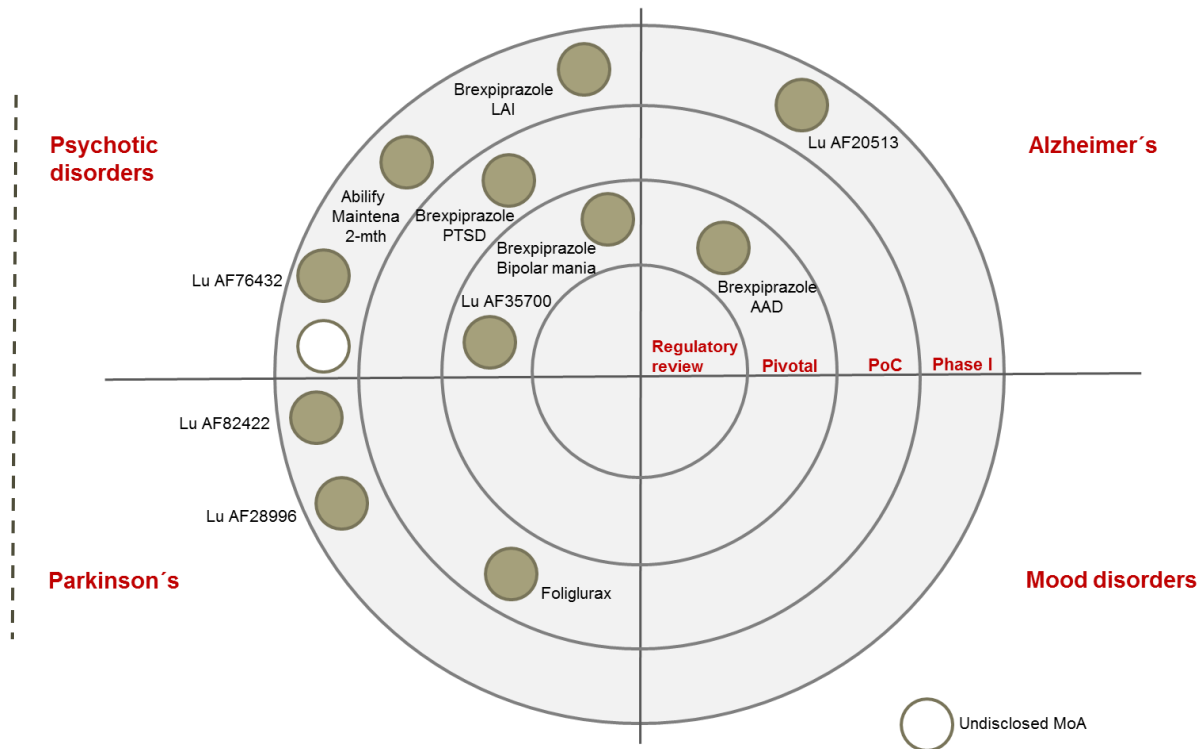
- Phase II proof of concept study in subjects with Parkinson's treated with a stable dose of levodopa who are experiencing both end-of-dose wearing off and Levodopa-Induced Dyskinesia (n = 165) (NCT03162874)

Upcoming events

- PoC study expected to finalize in Q3 2019

The value of Lundbeck's R&D pipeline is increasing

- ★ **Brexpiprazole:** Approved by the European Commission and in Switzerland
- ★ **Vortioxetine:** Strong pivotal data in Japanese patients
- ★ **Lu AF35700:** Finished recruiting in *DAYBREAK I*
- ★ **Abilify Maintena 2-month:** Single dose study finished now moving into multi-dose study
- ★ **Lu AF76432:** Phase I initiated in May 2018 (schizophrenia)
- ★ **Lu AF28996:** Phase I initiated in June 2018 (Parkinson's)
- ★ **Lu AF82422:** Phase I initiated in August 2018 (Parkinson's)



Pipeline progressing with further newsflow expected in the next 12 months

★ **Lu AF35700: Data from first pivotal study**

- ★ Headline results from *DAYBREAK I* (Q4 2018)

★ **Brexpiprazole: Data from life cycle management programme**

- ★ Headline results from Proof of Concept (phase II) study in PTSD (Q1 2019)
- ★ Headline results from pivotal programme in bipolar mania (Q1 2019)

★ **Trintellix sNDA**

- ★ The U.S. FDA accepted an sNDA for the drug to treat MDD in patients with treatment-emergent sexual dysfunction in February 2018. PDUFA is set to 21 October 2018

★ **Lu AF20513: Entering clinical Proof of Concept study**

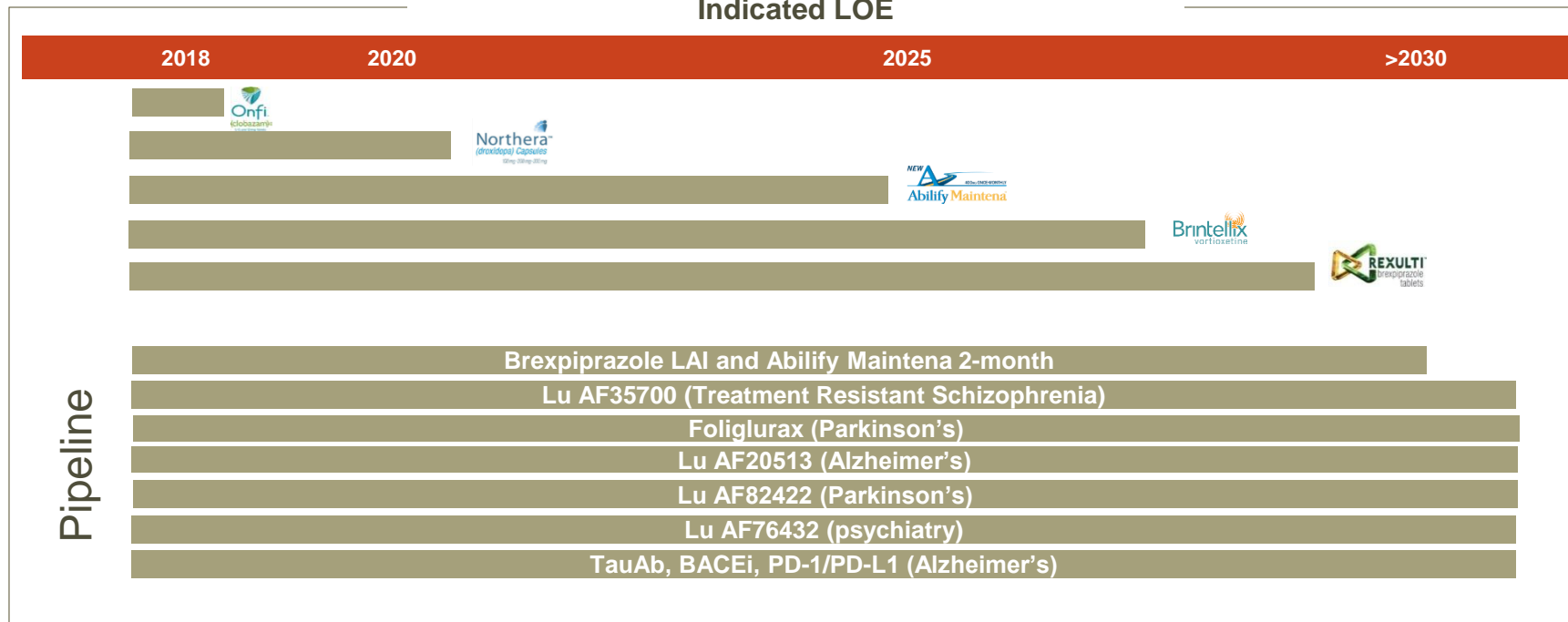
- ★ Based on the data from phase I, Lundbeck intends to advance Lu AF20513 into a PoC clinical study in Alzheimer's disease patients (H1 2019)

★ **Foliglurax: Clinical Proof of Concept**

- ★ Headline results from PoC study (Q3 2019)

Higher degree of transparency in future revenue drivers than Lundbeck has had historically

Indicated LOE



Financial highlights



U.S. neurology products, Northera and Onfi, continue to show solid growth in local currency

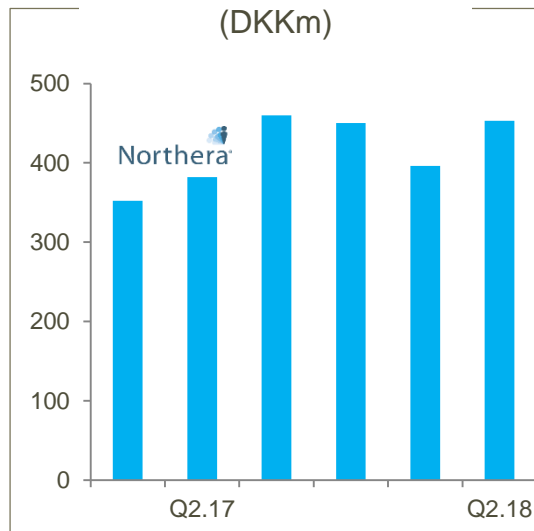
Northera

- ★ Up 16% (30% in L.C.) to DKK 849 million in H1 2018
- ★ Northera impacted by seasonal swings in demand
- ★ Expected continued growth

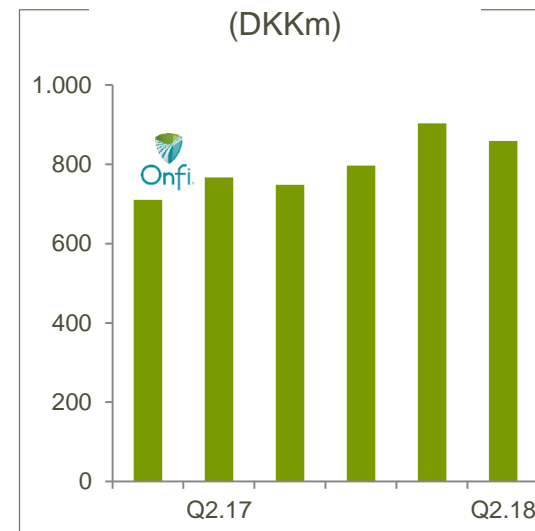
Onfi

- ★ Up 19% (34% in L.C.) to DKK 1,762 million in H1 2018
- ★ Expected to grow until generic clobazam is introduced, expectedly in Q4 2018

Northera sales
(DKKm)

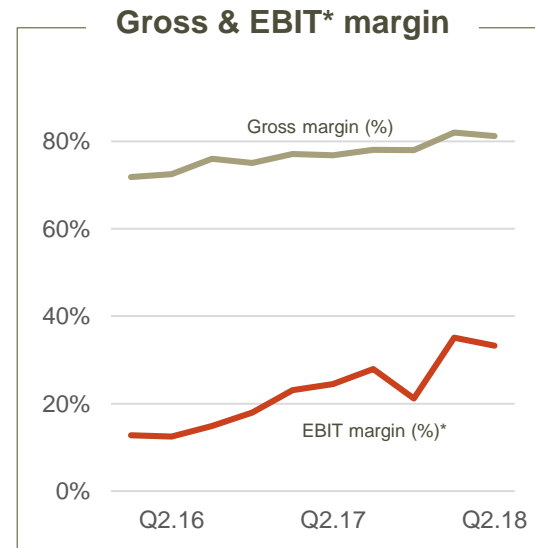
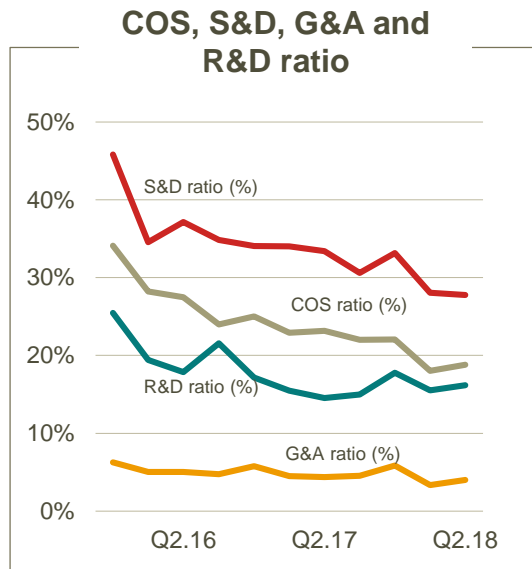


Onfi sales
(DKKm)



Maintaining strong cost focus while also investing in the business

- ★ **Total costs** down 5% while growing topline by 9% in H1 2018
- ★ **EBITDA margin** of 38.2% vs. 31.2% in H1 2017
- ★ **EBIT margin** of 32.4% vs. 24.3% in H1 2017
- ★ **COS%:** Expected to show continued improvements vs. 2017
- ★ **S&D%:** Stable or modest additional improvements vs. 2017
- ★ **G&A%:** Stable or modest additional improvements vs. 2017
- ★ **R&D%:** Slightly increasing vs. 2017 depending on project execution



*) Data adjusted for Other operating items, net

Strong growth in earnings

- ★ Significant negative impact from FX reducing revenue growth
 - ★ Growth for all key products and in all regions in L.C.
- ★ EPS growth of 83%
- ★ Significant EPS improvement driven by
 - ★ Solid revenue growth
 - ★ Strong improvement of profitability
 - ★ Reduced tax rate as the U.S. tax reform has decreased the group tax rate from 40% in H1 2017 to 27%

Financial results

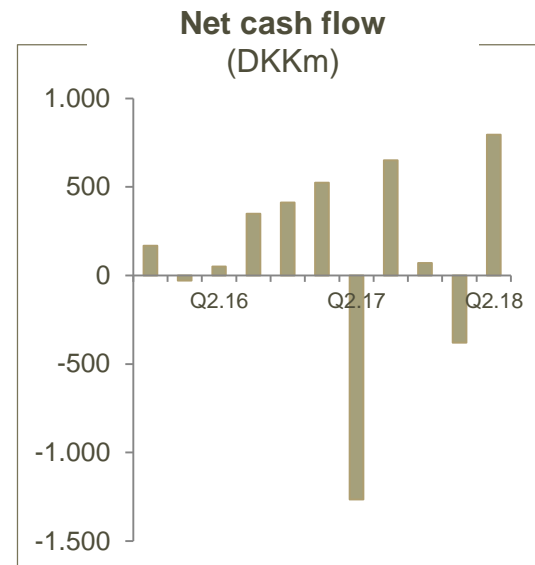
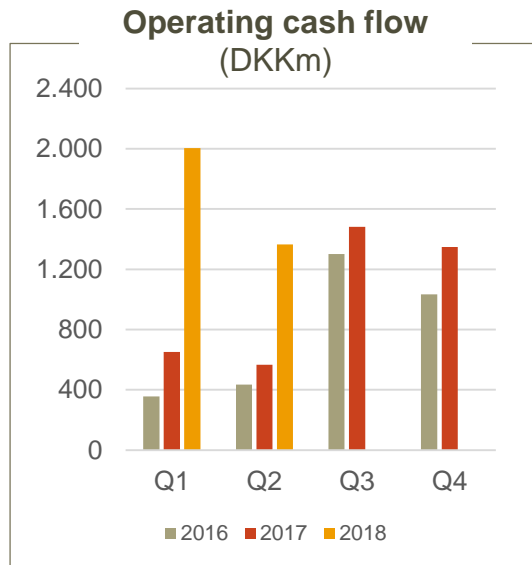
DKKm	H1.18	H1.17	Δ%
Revenue	9,288	8,494	9%
Gross margin	81.6%	76.9%	-
EBIT	3,006	2,061	46%
EBIT margin	32.4%	24.3%	-
Core EBIT	3,578	2,500	43%
Net profit	2,198	1,195	84%
EPS	11.07	6.05	83%

Revenue (reported vs. L.C.)

DKKm	H1.18	Δ DKKm	Δ% L.C.
Revenue	9,288	+794	+14%
- Abilify Maintena	771	+104	+22%
- Brintellix/Trintellix	999	+205	+36%
- Northera	849	+115	+30%
- Onfi	1,762	+285	+34%
- Rexulti	752	+165	+44%
North America	5,287	+77	+14%
Int. Markets	1,920	+51	+11%
Europe	1,518	+87	+7%

Strong cash flow generation and improved ROIC

- ★ Cash flows from operating activities increased from DKK 1,217 million in H1 2017 to DKK 3,369 million in H1 2018
- ★ Acquisition of **Prexton Therapeutics** in Q1 impacts net cash flow by DKK 745 million
- ★ **Dividend payout** for 2017 increased to DKK 1.6 billion
- ★ **ROIC** increased from 26.6% in FY2017 to 53.2% in H1 2018

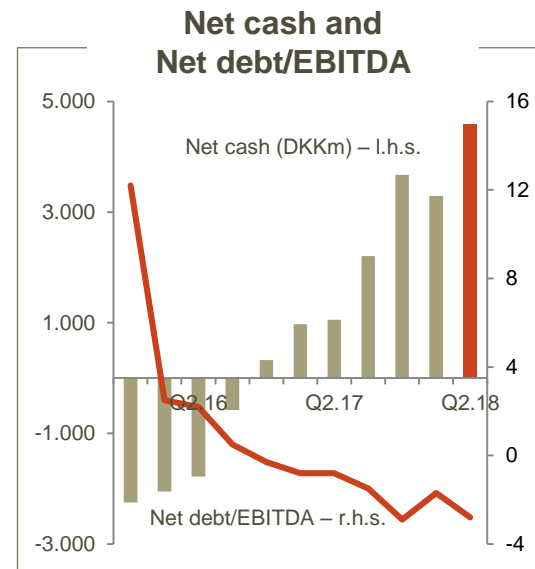
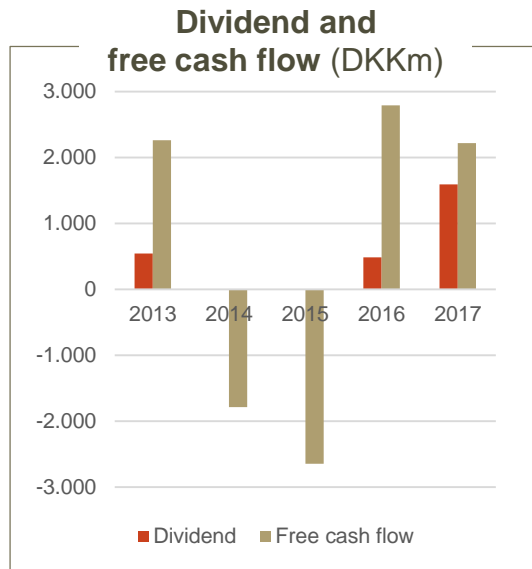


Capital allocation

- ★ Dividend increased from DKK 2.45 to DKK 8.00 per share
- ★ Net debt/EBITDA of -1.3x in H1 2018 vs. -0.4x in H1 2017
- ★ Net cash expected to reach DKK 5-5.5 billion in 2018

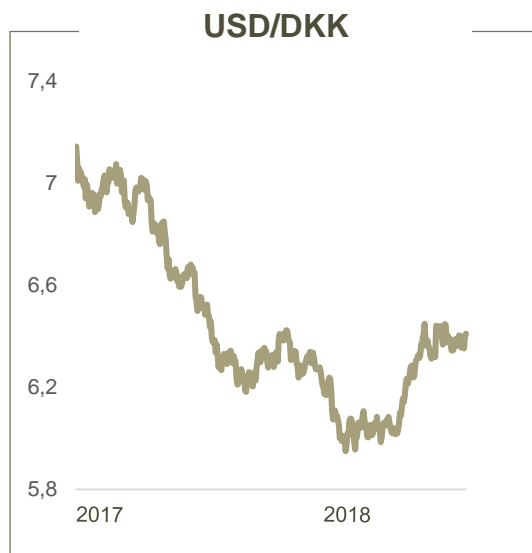
Cash flow priorities

- ★ Strategic cash reserve of DKK 4-6 billion
- ★ Maintain investment grade status (NIBD/EBITDA < 2.0x)
- ★ Increasing dividends linked to long-term performance
- ★ Dividend policy: Pay-out ratio of 60-80%

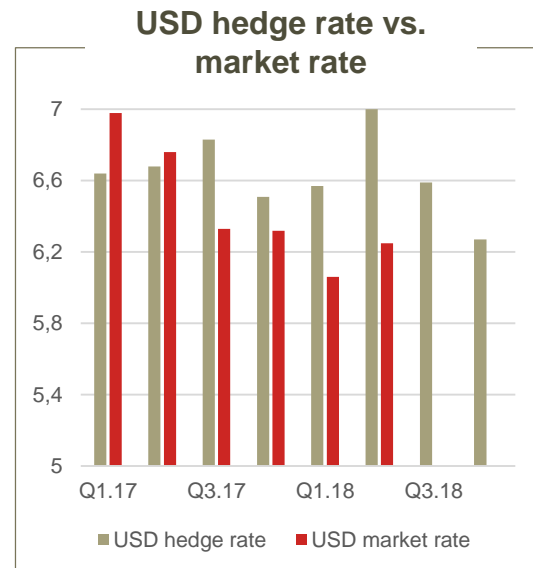


Hedging at Lundbeck

- ★ The main currency risk concerns fluctuations of USD, JPY, CNY and CAD
- ★ Lundbeck hedges a significant part of the risk (at EBIT level) for a period of 12-18 months
- ★ From Q1 2018, gains/losses (net) is shown as a separate line item in revenue
- ★ Expected hedging gain of DKK 200-300 million in 2018



Source: Bloomberg



2018 financial outlook revised

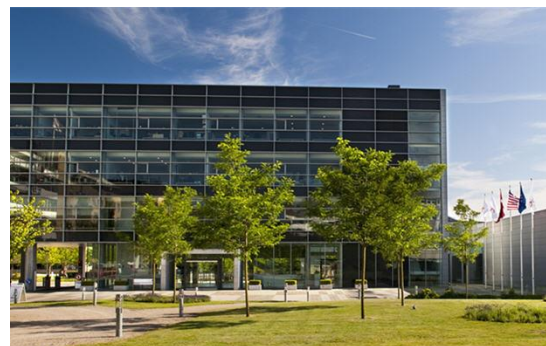
- ★ Growth in all three regions in local currencies
- ★ Continued growth for key products to outpace the decline from generic erosion
- ★ Onfi revenue is expected to decline 40-50% compared to prior quarters in 2018
- ★ Net financial items of DKK ±50 million expected in 2018
- ★ No known additional one-off income and/or expenses
- ★ Unchanged currencies from end-July 2018

2018 financial guidance

DKKbn	2016	2017	Previous 2018 guidance	Revised 2018 guidance	~Δ% (y/y)
Revenue	15.6	17.2	17.2-18.0	17.6-18.0	2-5%
EBIT	2.3	4.4	4.8-5.2	4.9-5.2	11-18%
Implied EBIT margin	14.7%	25.6%	~27-30%	~27-30%	-
Tax rate	43.9%	38.7%	26-28%	26-28%	-

Key priorities

- ★ Sustain sales **momentum** of key products
- ★ Continue to **focus** on high profitability
- ★ Deliver on **innovation**
- ★ High **dividend** pay-outs



Lundbeck



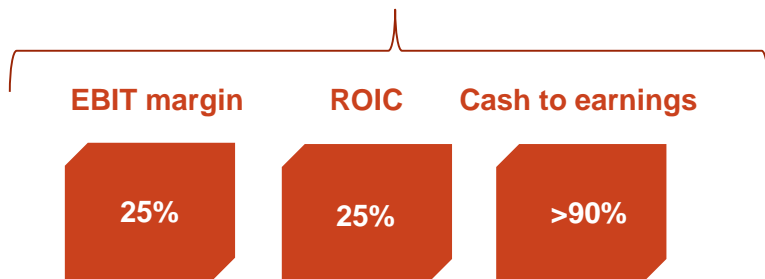
2017 - CNS market overview

	Market size (2017)				Unmet medical needs	Market leaders (2017)	
	Value USDbn	Value Growth	Volume Growth	# of patients*		Compound	Share value
Total pharma	1,011	+3%	+1%	-	-	-	-
Total CNS	146	0%	+1%	-	-	-	-
Anti-Alzheimer's (N7D)	4.5	-16%	+4%	>7 million	<ul style="list-style-type: none"> • Disease modifying treatment • Disease slowing agents • Improved symptomatic treatments • Longer lasting symptomatic treatments 	<ol style="list-style-type: none"> 1. Memantine 2. Donepezil 3. Rivastigmine 4. Galantamine 	<ol style="list-style-type: none"> 44% 23% 20% 8%
Anti-depressants (N6A)	12.6	-3%	+3%	~40 million	<ul style="list-style-type: none"> • Drugs with higher remission rates • Increased onset of action • Current therapies are relatively well-tolerated but still room for improvement especially on sexual side effects 	<ol style="list-style-type: none"> 1. Duloxetine 2. Escitalopram 3. Bupropion 4. Venlafaxine 	<ol style="list-style-type: none"> 12% 11% 10% 10%
Anti-Parkinson's (N4A)	4.0	0%	+3%	>3 million	<ul style="list-style-type: none"> • Therapies that provide neuroprotection and/or neurorestoration • An optimal trial design for demonstrating neuroprotection and/or neurorestoration • Control of levodopa-induced motor response complications 	<ol style="list-style-type: none"> 1. Levodopa 2. Pramipexole 3. Rotigotene 4. Rasagiline 	<ol style="list-style-type: none"> 18% 13% 13% 10%
Anti-psychotics (N5A)	18.8	-13%	+4%	Approx 1% of global population	<ul style="list-style-type: none"> • Improved treatment of cognitive dysfunction • Improved treatment of negative symptoms • Improved treatment of co-morbid depression and anxiety • Early stage, definitive diagnostics 	<ol style="list-style-type: none"> 1. Paliperidone Palmitate 2. Lurasidone 3. Aripiprazole 4. Quetiapine 	<ol style="list-style-type: none"> 18% 16% 15% 11%

Source: IMS Health Analytics Link 2017 (Audited sales), Growth, USD % y/y

Financial targets

Targets within the 2018-2020 period



Dividend pay-out Net debt/EBITDA



Financial policies

Target achievements

	H1.18	2017	2016	2015
EBIT margin	32.4%	25.6%	14.7%	(46.7%)
ROIC (annualized)	53.2%	30.8%	13.2%	(45.4%)
Cash to earnings	114.1%	141.8%	230.3%	N/A
Dividend Pay-out	-	61%	40%	0%
Net debt/EBITDA	(1.3)	(0.7)	(0.1)	10.7

H1 2018 and FY 2017 - Product distribution of revenue

DKKm	FY 2017	FY 2016 ^{*)}	H1 2018	H1 2017	Growth	Growth in local currencies	% of total
TOTAL:							
Abilify Maintena	1,333	1,114	771	667	16%	22%	8%
Brintellix/Trintellix	1,663	1,105	999	794	26%	36%	11%
Cipralex/Lexapro	2,392	2,518	1,339	1,314	2%	9%	14%
Northera	1,644	1,087	849	734	16%	30%	9%
Onfi	3,022	2,409	1,762	1,477	19%	34%	19%
Rexulti	1,247	826	752	587	28%	44%	8%
Sabril	1,509	1,342	652	780	(16%)	(6%)	7%
Xenazine	1,046	1,571	230	551	(58%)	(53%)	3%
Other pharmaceuticals	3,028	3,337	1,371	1,606	(15%)	(11%)	15%
Other revenue	402	325	286	137	109%	110%	3%
Hedging	(52)	-	277	(153)	-	-	3%
Total revenue	17,234	15,634	9,288	8,494	9%	14%	100%

*) In 2016 effects from hedging is included in revenue for the individual products.

H1 2018 and FY 2017 - Geographic distribution of revenue - 1

DKKm	FY 2017	FY 2016 ^{*)}	H1 2018	H1 2017	Growth	Growth in local currencies	% of total
NORTH AMERICA:							
Abilify Maintena	591	526	325	291	12%	24%	6%
Trintellix	974	706	542	450	20%	34%	11%
Northera	1,644	1,087	849	734	16%	30%	16%
Onfi	3,022	2,409	1,762	1,477	19%	34%	33%
Rexulti	1,245	826	746	587	27%	42%	14%
Sabril	1,509	1,342	652	780	(16%)	(6%)	12%
Xenazine	1,016	1,557	220	538	(59%)	(54%)	4%
Other pharmaceuticals	672	669	191	353	(46%)	(41%)	4%
Total revenue	10,673	9,122	5,287	5,210	1%	14%	100%

*) In 2016 effects from hedging is included in revenue for the individual products.

H1 2018 and FY 2017 - Geographic distribution of revenue - 2

DKK m	FY 2017	FY 2016 ^{*)}	H1 2018	H1 2017	Growth	Growth in local currencies	% of total
EUROPE:							
Abilify Maintena	637	508	385	326	18%	19%	26%
Brintellix	376	220	260	179	45%	45%	17%
Cipralext	643	760	323	336	(4%)	(3%)	21%
Other pharmaceuticals	1,149	1,424	550	590	(7%)	(6%)	36%
Total revenue	2,805	2,912	1,518	1,431	6%	7%	100%
INTERNATIONAL MARKETS:							
Abilify Maintena	105	80	61	50	23%	33%	3%
Brintellix	313	179	197	165	20%	35%	11%
Cipralext/Lexapro	1,582	1,571	945	887	7%	16%	49%
Ebixa	469	486	253	280	(10%)	(3%)	13%
Other pharmaceuticals	937	959	464	487	(5%)	1%	24%
Total revenue	3,406	3,275	1,920	1,869	3%	11%	100%

*) In 2016 effects from hedging is included in revenue for the individual products.

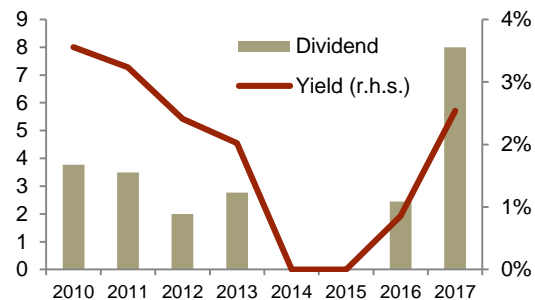
H1 2018 - Cash generation

DKKm	H1 2018	H1 2017	FY 2017
Cash flows from operating activities	3,369	1,217	4,045
Cash flows from investing activities	(1,370)	(517)	(1,830)
Cash flows from operating and investing activities (free cash flow)	1,999	700	2,215
Cash flows from financing activities	(1,583)	(1,442)	(2,235)
Net cash flow for the period	416	(742)	(20)
Cash, bank balances and securities, end of period	4,588	1,961	3,677
Interest-bearing debt	-	(909)	-
Net cash/(net debt)	4,588	1,052	3,677

H1 2018 - Balance sheet and dividend

DKKm	30.06.2018	31.12.2017
Intangible assets	7,989	7,565
Other non-current assets	3,199	3,347
Current assets	10,515	8,844
Assets	21,703	19,756
Equity	12,559	12,181
Non-current liabilities	1,092	1,096
Current liabilities	8,052	6,479
Equity and liabilities	21,703	19,756
Cash and bank balances	2,561	2,155
Securities	2,027	1,522
Interest-bearing debt	-	-
Interest-bearing debt, cash, bank balances and securities, net end of period	4,588	3,677

Dividend (DKK)



- * Dividend of DKK 8.00 per share for 2017, corresponding to a payout ratio of 61%
- * A total of DKK 1.6 million and a yield of 2.5%*
- * Dividend policy: Pay-out ratio of 60-80%

*Based on the share price of DKK 315.00

Costs – Full year figures

DKKm	2017	2016	2015	2017 ($\Delta\%$)	2016 ($\Delta\%$)
Revenue	17,234	15,634	14,594	10%	7%
Cost of sales	3,881	4,082	5,395	(5%)	(24%)
Sales & Distribution costs	5,649	5,488	6,706	3%	(18%)
Administrative expenses	833	805	1,160	3%	(31%)
R&D costs	2,705	2,967	8,149	(9%)	(64%)
Total costs	13,068	13,342	21,410¹⁾	(2%)	(38%)
EBIT	4,408 ²⁾	2,292	(6,816)	92%	-
Core EBIT	5,115	3,477	847	47%	311%
<i>Cost of sales</i>	23%	26%	37%	-	-
<i>Sales & Distribution costs</i>	33%	35%	46%	-	-
<i>Administrative expenses</i>	5%	5%	8%	-	-
<i>R&D costs</i>	16%	19%	56%	-	-
<i>EBIT margin</i>	26%	15%	(47%)	-	-

Included are 1) Restructuring costs and impairment of product rights of around DKK 7bn. 2) Includes Other operating items, net

Financial terms and territory structure of the Otsuka alliance entered in November 2011

Milestone payments

Payment to:



	Abilify Maintena	Rexulti	Selincro
Development milestones/upfront	USD 200m	USD 600m ³⁾	EUR 105m*
Approval milestones	USD 275m ¹⁾	USD 300m ²⁾	Un-disclosed
Sales milestones	Up to USD 425m depending on sales development		Un-disclosed

1) USD 100m upon US approval, USD 75m upon EU approval in schizophrenia, and USD 50m US and EU for a second indication. 2) USD 100m (US) and USD 50m (EU) for each of the two first indications

3) Development milestones of up to USD 600m after which shared development costs between parties. 4) USD 125m, USD 25m and USD 50m for first indication in the US, EU and Japan respectively. Second indication gives USD 50m, USD 25m and USD 25m, respectively.

Lundbeck's share of revenue and costs



	Abilify Maintena	Rexulti	Selincro
USA	20%	45%	-
EU-5, Nordic and Canada	50%	50%	-
Other Lundbeck territories	65%**	65%**	Un-disclosed

* Includes sales milestones

** All regions except Asia, Turkey and Egypt

*** All regions except Thailand and Vietnam

★ Selincro for Japan added to the alliance in October 2013

For more information, please contact Investor Relations

- ★ Lundbeck's shares have been listed on the Copenhagen Stock Exchange since 18 June 1999
- ★ Lundbeck has a Deutsche Bank sponsored ADR programme listed in the U.S. (OTC) effective from 18 May 2012
- ★ For additional company information, please visit Lundbeck at:
www.lundbeck.com

Number of shares	199,098,422
Own shares	388,327
Classes of shares	1
Restrictions	None
ISIN code	DK0010287234
Ticker symbol	LUN DC/LUN.CO (Bloomberg/Reuters)
ADR programme	Sponsored level 1
ADR symbol	HLUYY
Ratio	1:1

IR contact

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Financial calendar

9M 2018	7 November 2018
FY 2018	5 February 2019

Thank you!

Lundbeck

