



INVESTOR & ANALYST PRESENTATION

November 2016



Company disclaimer

This presentation contains forward-looking statements that provide our expectations or forecasts of future events such as new product introductions, product approvals and financial performance.

Such forward-looking statements are subject to risks, uncertainties and inaccurate assumptions. This may cause actual results to differ materially from expectations and it may cause any or all of our forward-looking statements here or in other publications to be wrong. Factors that may affect future results include interest rate and currency exchange rate fluctuations, delay or failure of development projects, production problems, unexpected contract breaches or terminations, government-mandated or market-driven price decreases for Lundbeck's products, introduction of competing products, Lundbeck's ability to successfully market both new and existing products, exposure to product liability and other lawsuits, changes in reimbursement rules and governmental laws and related interpretation thereof, and unexpected growth in costs and expenses.

Lundbeck undertakes no duty to update forward-looking statements.

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.



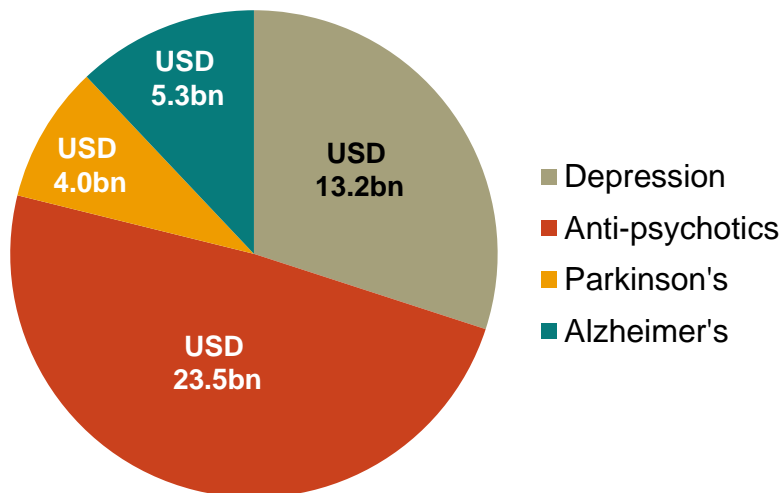
Lundbeck – who are we?

- ★ Danish based, global pharmaceutical company. Founded in 1915
- ★ Focused on four disease categories in CNS
- ★ Innovative treatments for patients with CNS diseases and with high unmet medical needs
- ★ Pursuing category leadership
- ★ Experienced management team and long history as CNS specialists
- ★ Revised 2016 financial guidance:
 - ★ Revenue: DKK 15.3-15.7bn
 - ★ EBIT: DKK 2.1-2.3bn
- ★ Market cap: DKK ~45bn (USD ~7bn)
- ★ ~5,000 employees

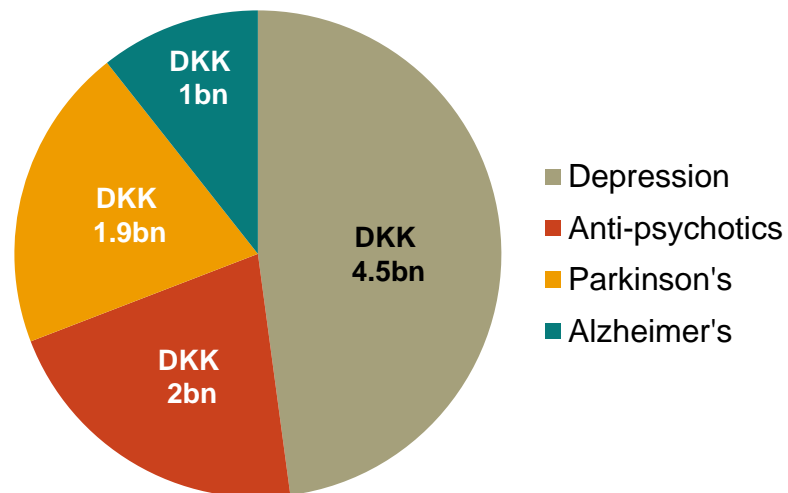


Distribution of sales in our four key therapeutic categories

Distribution of WW sales according to IMS Health (2015)

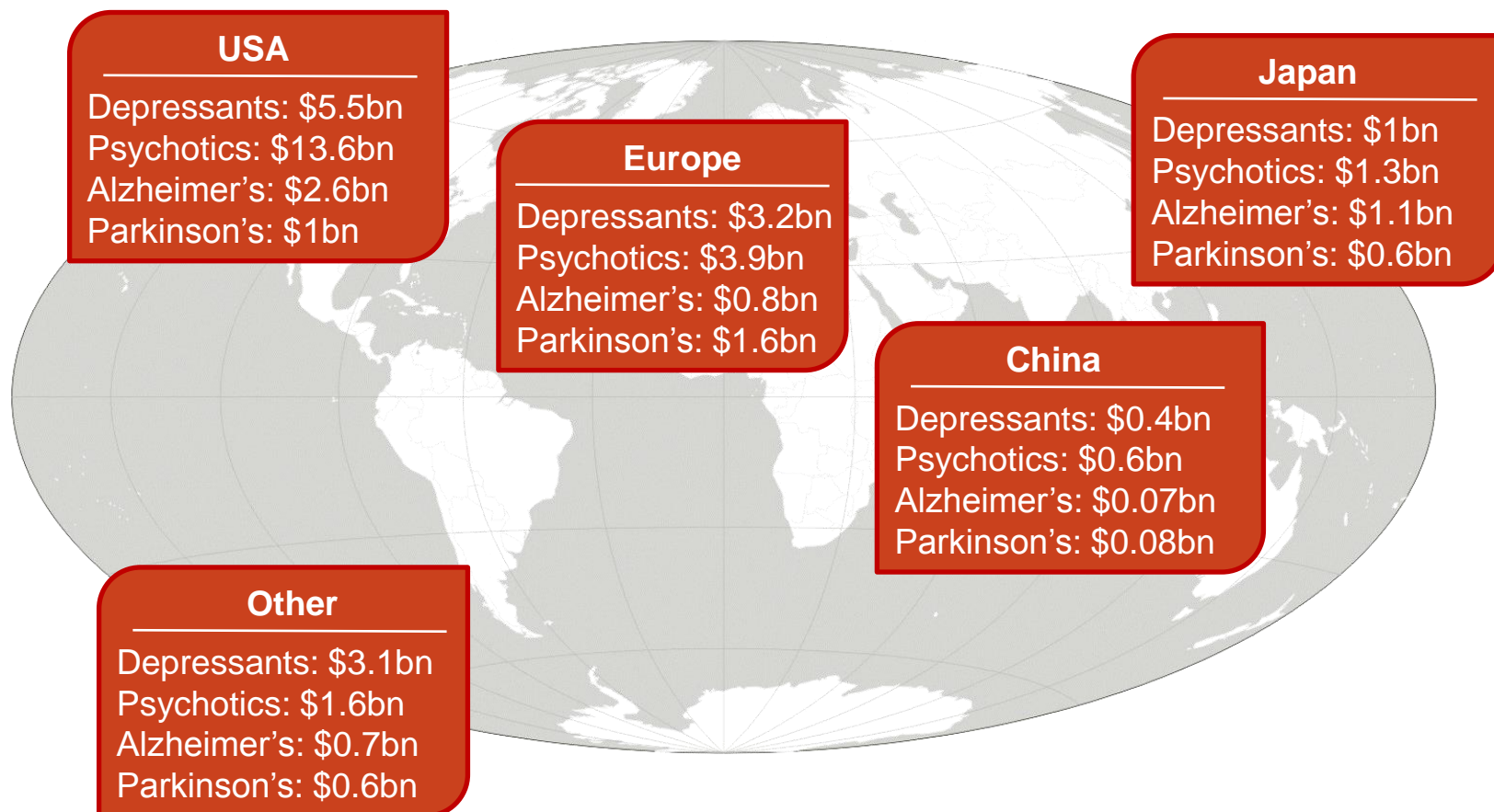


Indicative distribution of Lundbeck's 2015 revenue



Source: IMS Health Analytics Link 2016 (Audited sales),

Market sizes of the four key therapeutic categories



Source: IMS Health Analytics Link 2016 (Audited sales)

Our chosen therapeutic categories all have large potentials

High unmet medical needs



<50% has satisfactory treatment outcome

Large market segments



- Antipsychotics: USD 21.5bn
- Depression: USD 13.2bn
- Alzheimer's: USD 5.3bn
- Parkinson's: USD 4.0bn

Substantial growth opportunities



Lundbeck's revenue represents ~5% value share

1) IMS Health Analytics Link 2016 (Audited sales)

Q3 2016 highlights

All key products continue the solid momentum

- Revenue increased by 8% to DKK 3,948 billion
- Key products grew 77% to DKK 1,778 million - represents 45% of revenue

Operational efficiencies well on track

- EBIT increased to DKK 589 million from DKK (1,519) billion in Q3 2015
- EBIT margin significantly improved to 14.9%

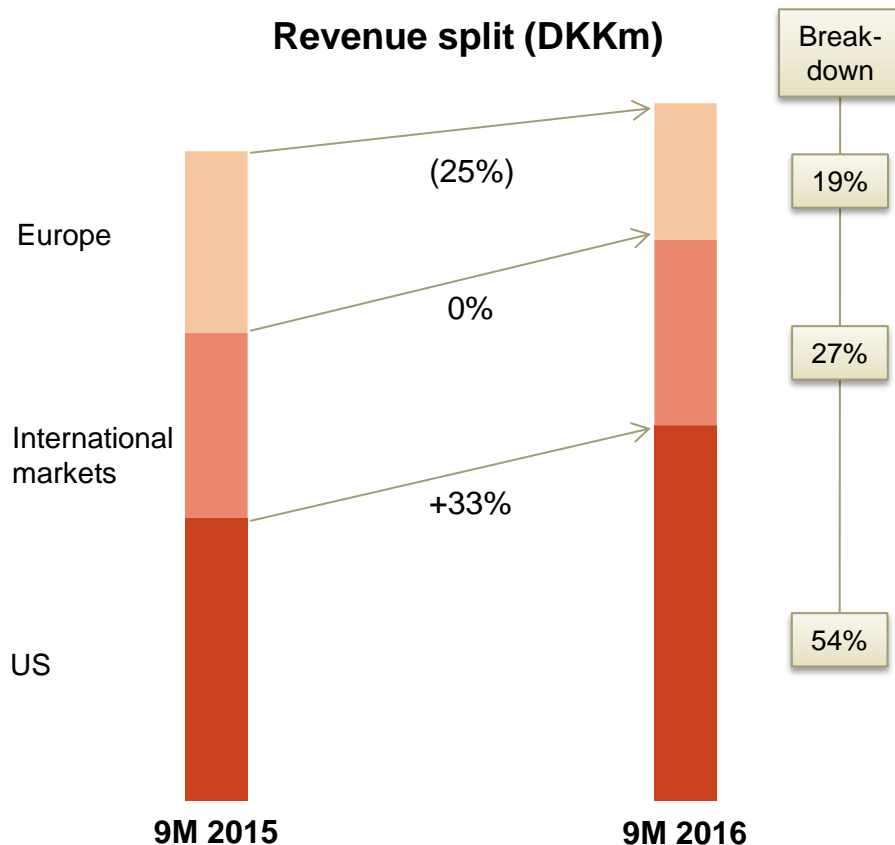
R&D

- Carnexiv and the sNDA on Rexulti have received FDA approvals
- The first phase III study investigating the efficacy of idalopirdine in patients with Alzheimer's disease did not meet the prespecified efficacy endpoints

2016 financial guidance raised

- Lundbeck now expects revenue of DKK 15.3-15.7 billion and EBIT of DKK 2.1-2.3 billion for 2016

The US - the driver of sales performance



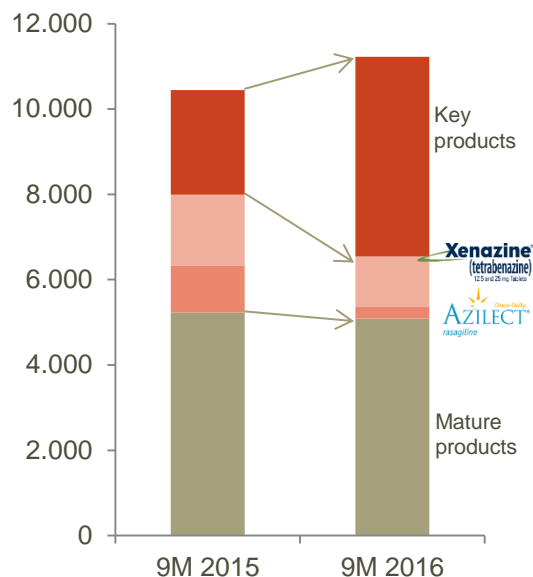
★ In the US, the strong uptake of key products more than mitigates the Xenazine erosion

★ International markets shows decent growth, but is negatively impacted by Venezuela and Azilect handback

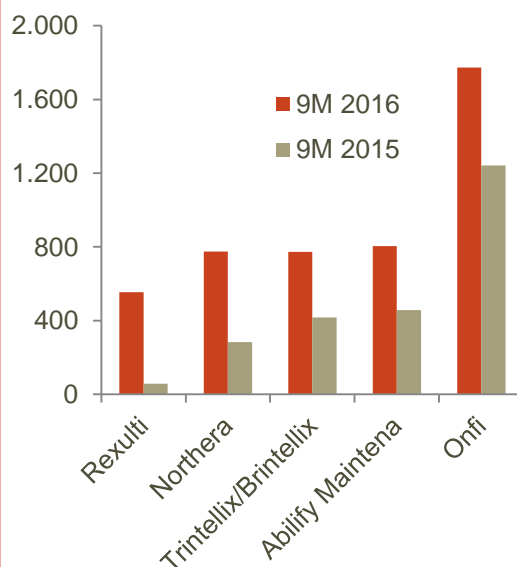
★ Europe negatively impacted by Azilect handback and timing of market access

Revenue of DKK 11,469 million – up 6% in 9M 2016

Revenue contributors (DKKm)



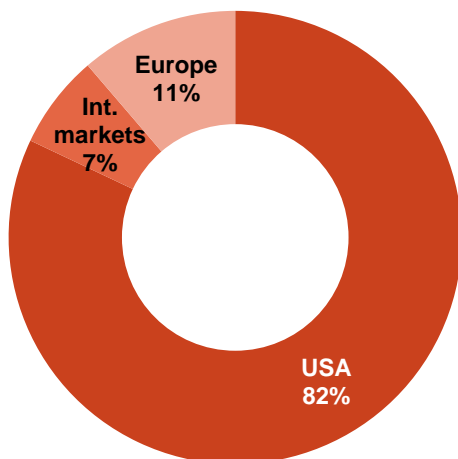
Key products (DKKm)



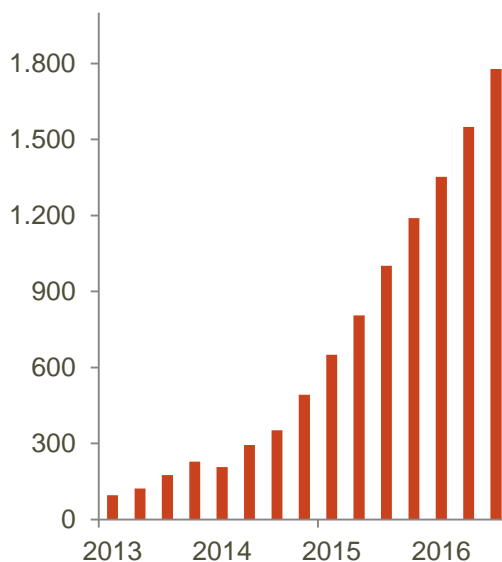
- ★ Revenue grew 8% in Q3 2016 reaching DKK 3,948 million
- ★ Continued strong growth for all key products
- ★ Growth negatively impacted by Azilect handback and Xenazine erosion
- ★ Remaining mature portfolio relatively stable

Key product sales of DKK 4,680 million – up 90% in 9M 2016

Key product regional split (9M)



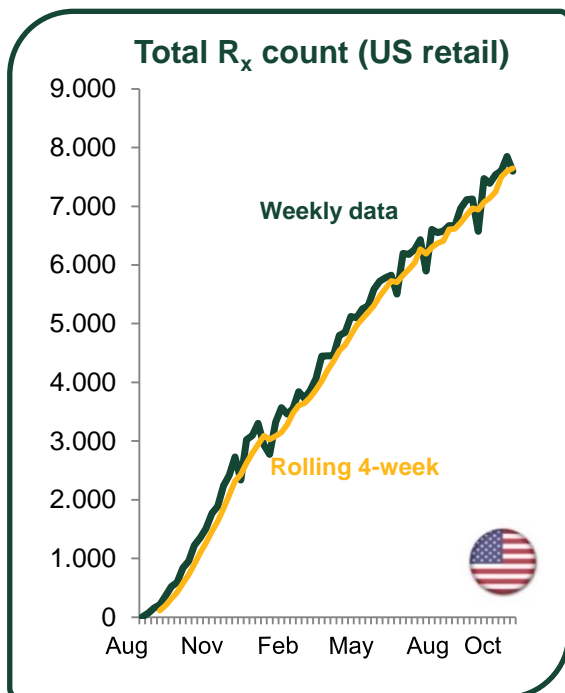
Quarterly revenue (DKKm)



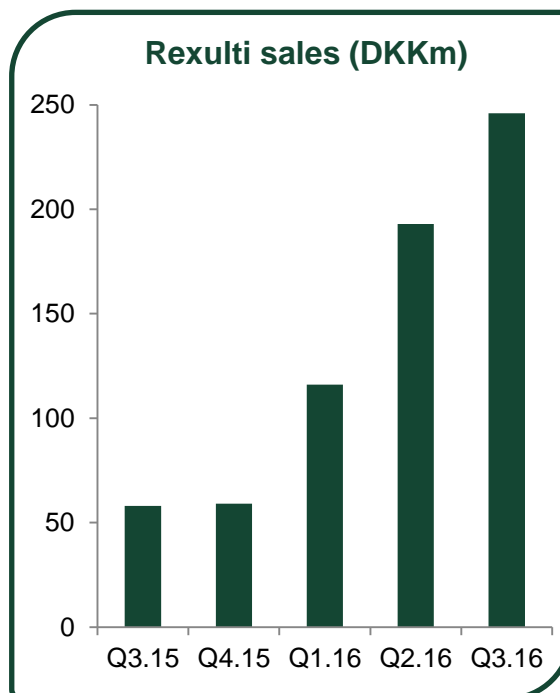
- ★ Sales increased 77% in Q3 reaching DKK 1,778 million
- ★ Growth primarily driven by demand
- ★ Key products constitute 45% of revenue vs. 27% in Q3 2015
- ★ Solid growth momentum set to continue



Rexulti sales of DKK 555 million – up 859% in 9M 2016



Source: Bloomberg (week ending 21/10/2016)



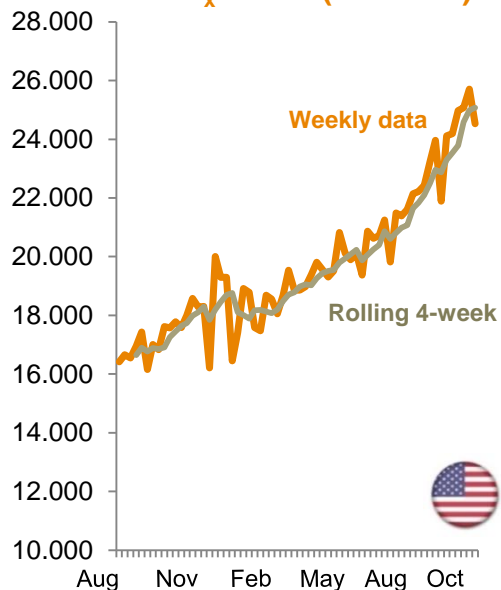
Lundbeck's share of revenue

- ★ Sales reached DKK 246 million in Q3
- ★ Average weekly volume growth since launch is around 120 TR_x
- ★ Majority of R_x prescribed for major depression
- ★ ~8% branded TR_x market share and ~9% branded NR_x market share

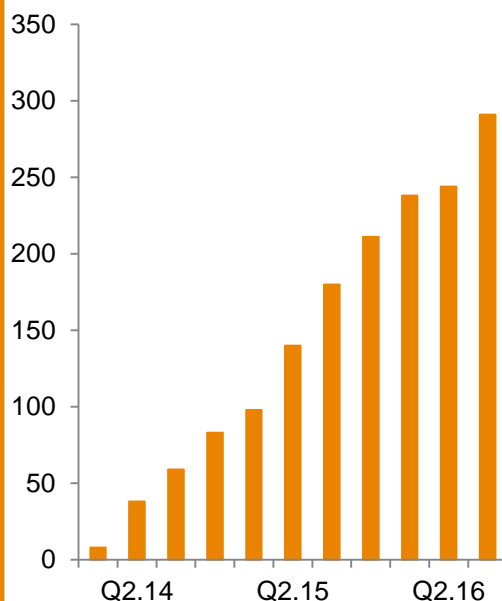


Brintellix/Trintellix sales of DKK 773 million – up 85% in 9M 2016

Total R_x count (US retail)



Brintellix/Trintellix sales (DKKm)



- ★ Sales reached DKK 291 million in Q3 – up 62%
- ★ US DTC campaign commenced mid-July 2016
- ★ 42% market share amongst branded products in new to brand (NBR_x) prescriptions
- ★ Average weekly US volume growth since August 2015 is around 130 TR_x
- ★ Encouraging launches in Brazil, Italy and Spain

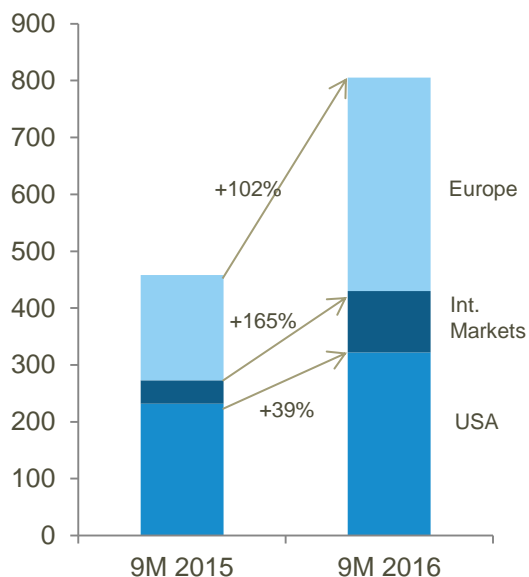
Source: Bloomberg (week ending 21/10 2016)

Brintellix
vortioxetine

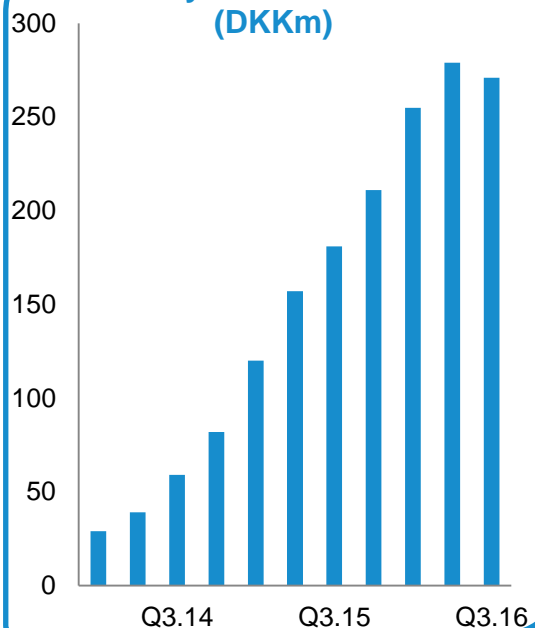
Trintellix™
vortioxetine
5mg•10mg•20mg tablets

Abilify Maintena sales of DKK 805 million – up 76% in 9M 2016

Revenue contributors (DKKm)



Abilify Maintena sales (DKKm)



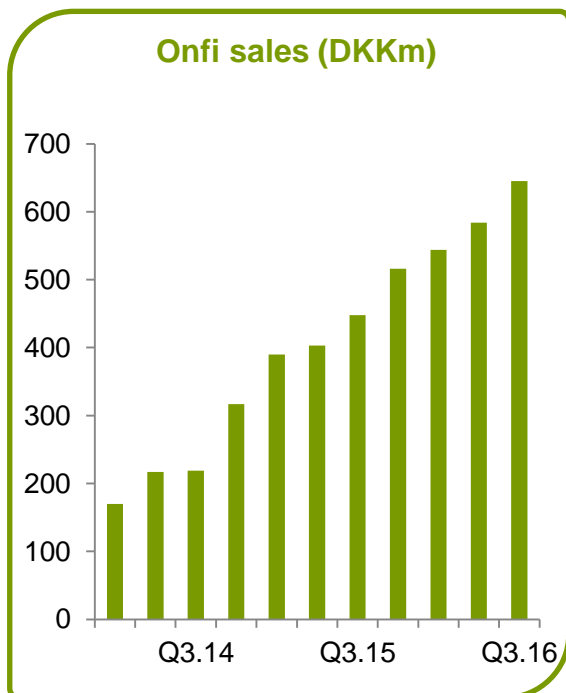
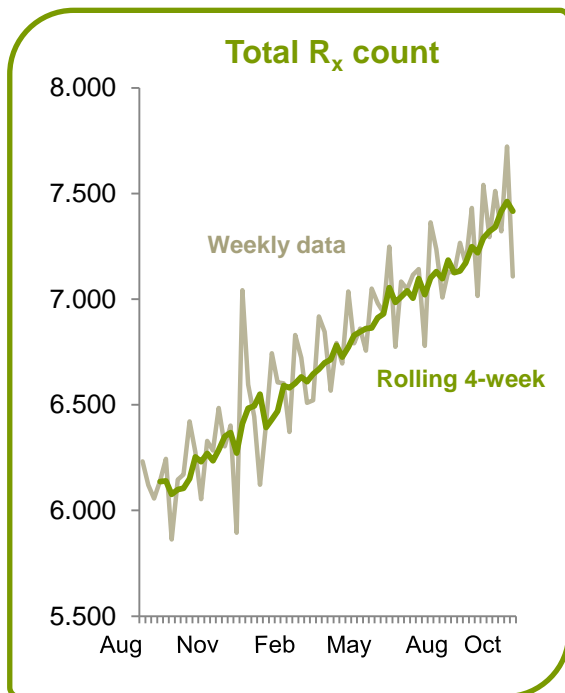
Lundbeck's share of revenue

- ★ Sales reached DKK 271 million in Q3 – up 49%
- ★ Q3 2016 impacted by quarterly fluctuations in the US and Europe
- ★ Met primary endpoint in bipolar disorder phase III trial and sNDA planned for end-2016
- ★ 10-16% value market share (LAI retail) in most markets



LAI = Long-Acting Injectable anti-psychotics

Onfi sales of DKK 1,773 million – up 43% in 9M 2016



- ★ Sales of DKK 645 million in Q3 – up 44%
- ★ Continued increased demand driven by increase in mg/R_x and higher volume (TR_x)

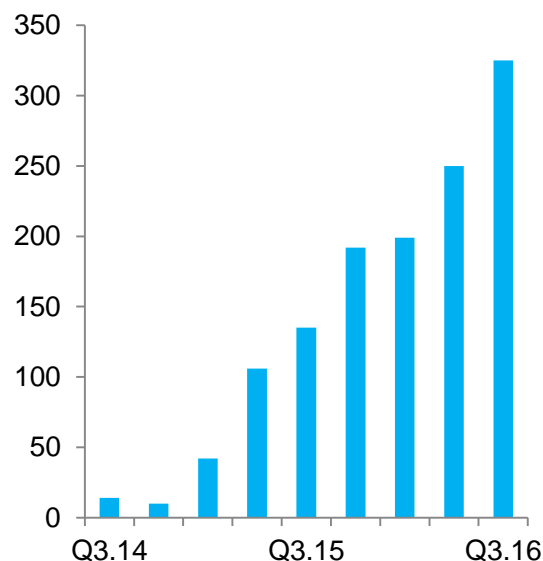


Source: Bloomberg (week ending 21/10 2016)

Northera sales of DKK 774 million – up 174% in 9M 2016

- ★ Launched in September 2014
- ★ Only chronic oral therapy treating root cause of symptomatic nOH¹
- ★ Available in Japan since 1989
- ★ Good synergies with neurology franchise
- ★ 80,000-150,000 nOH patients in the US (MSA, PAF, PD only)²

Northera sales (DKKm)



- ★ Sales reached DKK 325 million in Q3 – up 142%
- ★ Growth primarily driven by demand

Northera[™]
(droxidopa) Capsules
100 mg - 200 mg - 300 mg



1) Neurogenic Orthostatic Hypotension; 2) MSA=Multiple System Atrophy; PAF=Pure Autonomic Failure; PD=Parkinson's Disease

Q3 R&D highlights

Abilify Maintena

- ★ Submission of sNDA for bipolar disorder on track for end-2016

Brintellix/Trintellix

- ★ Feedback from FDA regulatory dialogue regarding sNDA expected during Q1 2017
- ★ Failed to achieve significance in separating from placebo in phase II ADHD study¹⁾

Carnexiv

- ★ FDA approved in October 2016

Rexulti

- ★ FDA approved labeling update for maintenance treatment of schizophrenia

Idalopirdine

- ★ Negative headline result from *STARSHINE* study²⁾

Lu AF35700

- ★ Open-label extension study initiated³⁾

Lundbeck's development pipeline

Disease areas	Phase I	Phase II	Phase III	Registration
Alzheimer's	Lu AF20513		Idalopirdine Rexulti	
Depression		Brintellix, ADHD	Rexulti (ROW) Abilify Maintena, BP	
Parkinson's	Lu AE04621			
Psychotic disorders			Lu AF35700 Rexulti (EU, ROW)	

1) NCT02327013. 2) NCT01955161. 3) NCT02892422

Our path to category leadership

Current products

Pipeline

Depression



Research projects

Psychotic disorders



Lu AF35700

Research projects

Alzheimer's



Rexulti

Idalopirdine

Lu AF20513

Research projects

Parkinson's



Research projects

Early clinical projects

First phase III study out of three for idalopirdine showed disappointing headline results

Regulatory

- ★ Support an indication for:
 - ★ Treatment of mild to moderate dementia of Alzheimer's type as adjunctive therapy to donepezil
 - ★ Inclusion of patients on other AChEIs may support indication for use as adjunctive treatment in combination with all AChEIs
- ★ Effect on ADAS-Cog and at least one of ADCS-ADL or ADCS-CGIC is acceptable demonstration of symptomatic efficacy in mild-to-moderate AD

Clinical phase III programme

- ★ >2,500 mild to moderate Alzheimer's patients
- ★ Headline conclusions from the remaining pivotal studies due in Q1 2017
- ★ In the *STARSHINE* study, idalopirdine showed a weak efficacy profile for both dosages
- ★ In addition, the secondary endpoints also did not show separation from placebo
- ★ The overall safety profile showed that idalopirdine was safe and well tolerated

1) Schmidt et al, A clinical positron emission tomography (PET) study investigating occupancy at the 5-HT₆ receptor after multiple oral doses of Lu AE58054 in healthy men. Poster at AAIC July 2014. 2) Wilkinson et al, Safety and efficacy of idalopirdine, a 5-HT₆ receptor antagonist, in patients with moderate Alzheimer's disease (LADDER): a randomised, double-blind, placebo-controlled phase 2 trial. *Lancet Neurology* 10/2014

Abilify Maintena met primary endpoint in study for the maintenance treatment of bipolar I disorder

- ★ One of the most common causes of relapse in bipolar disorder is poor treatment adherence
- ★ ~50% of patients being partially adherent or non-adherent to their treatment regimens
- ★ Bipolar I disorder affects ~1% of the population in the US



Clinical programme*

- ★ ~730 patients in placebo-controlled phase III 52-week study
- ★ Primary efficacy endpoint of this trial is time to recurrence of any mood episode
- ★ An open-label safety study (ATLAS) is ongoing recruiting ~755 patients
- ★ Expected sNDA on track for end-2016

*) NCT01567527 (Start: Aug. 2012); NCT01710709 (Start: Nov. 2012)

No drugs so far approved for agitation/aggression in Alzheimer's which remains a high unmet need

The condition

- ★ >20% of individuals in a community setting and >50% of nursing home residents with dementia have agitation
- ★ >1.5 million dementia patients in the US with agitation/aggression
- ★ Agitation in Alzheimer's is associated with increased caregiver burden, decreased functioning and earlier nursing home placement

The studies

Study #1 (12 weeks) (NCT01922258)	Study #2 (12 weeks) (NCT01862640)
~230 patients	~420 patients
0.5-2mg (flexible dose)	1mg and 2 mg
Study start: June 2013	Study start : July 2013

Clinical programme

- ★ Target population: Institutionalized or non-institutionalized setting
- ★ Primary outcome: Change in the Cohen-Mansfield Agitation Inventory (CMAI) total score
- ★ Headline results due end-2017



Lu AF35700 in Treatment Resistant Schizophrenia (TRS)

The condition

- ★ Psychiatrists readily recognize the term '**Treatment Resistant Schizophrenia**'
- ★ TRS is an **inability to control symptoms** of schizophrenia after a full round of two to three antipsychotics
- ★ Around 1/3 of schizophrenia patients is treatment resistant

The molecule

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

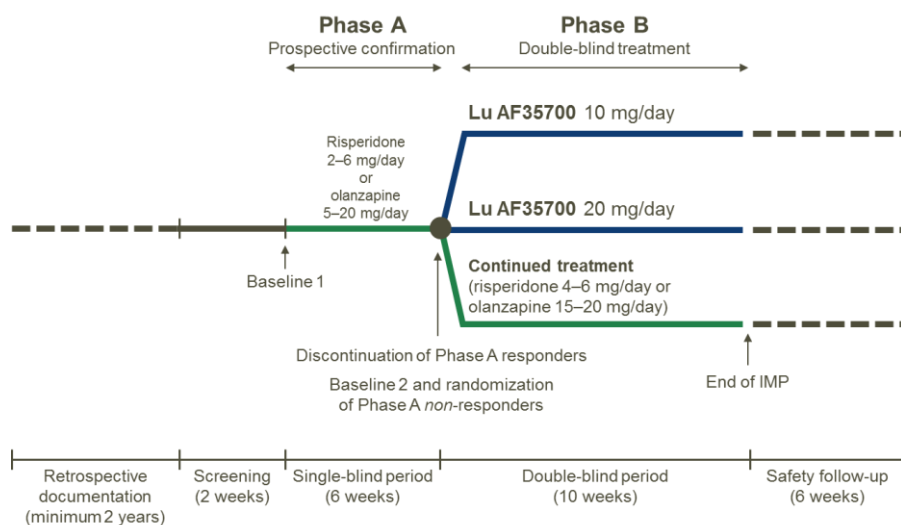
Clinical programme

- ★ Four clinical studies have been conducted, three studies in healthy people and one in patients with schizophrenia*)
- ★ The first study in the pivotal programme commenced in March 2016



*) Clinicaltrials.gov identifier: NCT02202226

Lu AF35700 study set-up in clinical phase III in Treatment Resistant Schizophrenia (TRS)



- ★ Oral, once daily
- ★ Approximately 1,000 patients
- ★ Expected completion by 2018

Primary endpoint

- ★ Change in PANSS total score

Secondary endpoints

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

Clinicaltrials.gov ID: NCT02717195

Complete Response Letter (CRL) for Trintellix sNDA received in March 2016

- ★ FDA recognizes the importance of cognitive dysfunction in MDD and views it as a legitimate target for drug development
- ★ In February 2016, FDA Psychopharmacologic Drugs Advisory Committee (PDAC) voted 8 to 2 that Takeda and Lundbeck presented substantial evidence to support a claim of effectiveness for Trintellix in treating certain aspects of cognitive dysfunction in adults with MDD
- ★ Dialogue to address CRL is ongoing and feedback expected during Q1 2017
- ★ We remain committed to Trintellix as a treatment option for patients with MDD

Depression does not only effect your mood: It may also effect your cognitive functioning

ATTENTION, CONCENTRATION
Do you...
 ✓ Lose track of conversations, TV programmes or reading?
 ✓ Find it difficult to do two things at once?
 ✓ Require many breaks while doing tasks?
 ✓ Struggle to talk on a cell phone while there is activity around you?

EXECUTIVE FUNCTIONING/ INDECISIVENESS
Do you...
 ✓ Have difficulty planning tasks or reaching goals?
 ✓ Have difficulty in predicting obstacles in a situation?
 ✓ Find it difficult to motivate yourself to start or complete tasks?
 ✓ Struggle to make decisions or plans?

MEMORY
Do you...
 ✓ Forget details after hearing them?
 ✓ Struggle to remember?
 ✓ Ask people to repeat what they said?
 ✓ Struggle to do familiar tasks?

SPEED OF PROCESSING
Do you...
 ✓ Have to take things slowly and complete each step very carefully?
 ✓ Panic if you have to rush familiar tasks?
 ✓ Feel that your speech is slower?
 ✓ Feel that your responses are slower?

EXCELLENT TOLERABILITY
Brintellix 10 mg once daily has been shown to be effective in treating depression in patients with moderate to severe depression. Brintellix has been shown to be effective in treating depression in patients with moderate to severe depression. Brintellix has been shown to be effective in treating depression in patients with moderate to severe depression.

ADDITIONAL BENEFITS
 ✓ Brintellix has been shown to be effective in treating depression in patients with moderate to severe depression.
 ✓ Brintellix has been shown to be effective in treating depression in patients with moderate to severe depression.
 ✓ Brintellix has been shown to be effective in treating depression in patients with moderate to severe depression.

NEW Brintellix vortioxetine

Brintellix: Taking care of more than mood

RECOMMENDED BY NICE*

*NICE (National Institute for Health and Care Excellence) has recommended Brintellix (vortioxetine) as a treatment option for people with major depressive disorder (MDD) who have not responded to other treatments. This recommendation is based on evidence from clinical trials showing that Brintellix is effective in treating MDD and also improves cognitive function. NICE (2016) October 2016.

Trintellix™
vortioxetine
5mg-10mg-20mg tablets

Brintellix
vortioxetine

The solid operational performance continues

DKK m	Q3 2016	Q3 2015	Variance	
			DKK	Local currencies
Revenue	3,948	3,669	8%	6%
Key products	1,778	1,002	77%	74%
EBIT	589	(1,519)		
EBIT margin	14.9%	(41.4%)		
Tax	264	(285)		
EPS	1.62	(6.40)		

★ Limited currency impact

★ Impact from loss of Azilect in Europe and generics mitigated by growth in key products

★ EBIT impacted by effects from restructuring (↑) and idalopirdine impairment loss (↓)

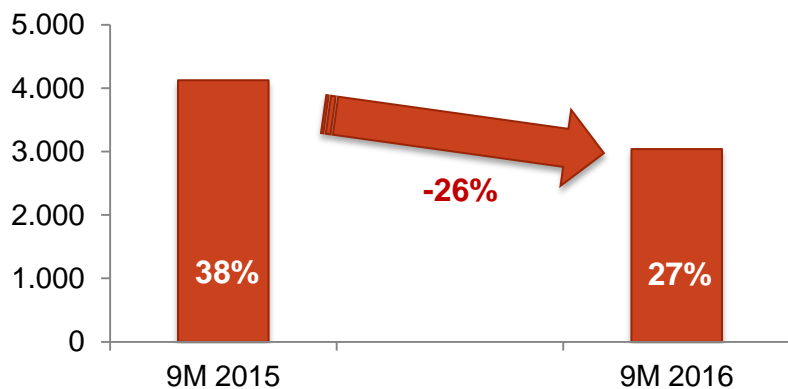
DKK m	9M 2016	9M 2015	Variance	
			DKK	Local currencies
Revenue	11,469	10,861	6%	5%
Key products	4,680	2,458	90%	89%
EBIT	1,541	(6,384)		
EBIT margin	13.4%	(58.8%)		
Tax	682	(1,230)		
EPS	3.74	(26.69)		

★ Core EBIT improved from DKK 423 million to DKK 988 million (Q3)

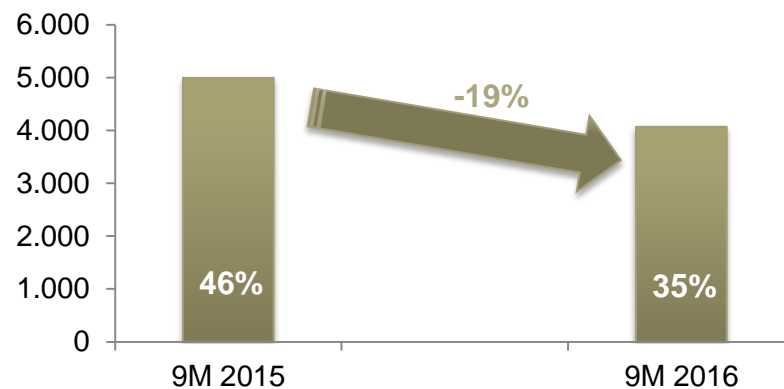
★ Core EBIT-margin improved from 11.9% to 25.0% in Q3

Continued focus on cost

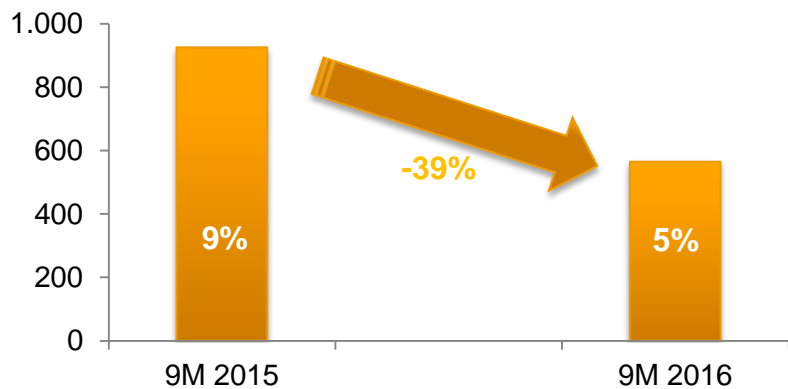
Cost of sales (DKKkM)



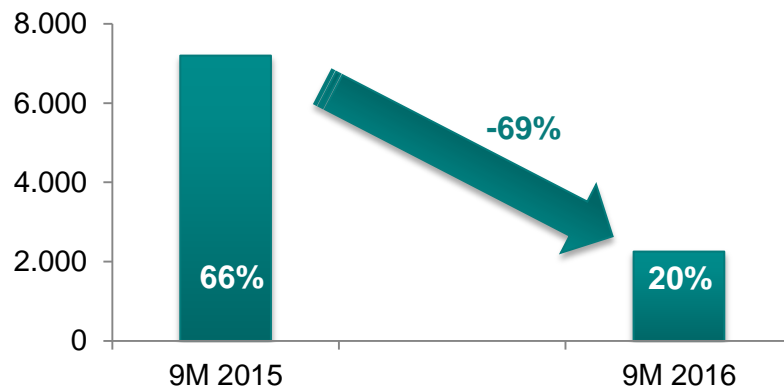
Sales and distribution (DKKkM)



Administration (DKKkM)



R&D (DKKkM)



Solid improvement in Lundbeck's cash flow

DKK m	Q3 2016	Q3 2015
Operating cash flow	1,301	(102)
Free cash flow	1,193	(1,498)
Net cash flow	349	(435)
Cash	1,785	1,334
Net interest-bearing debt	575	2,918
Net debt/EBITDA	0.5x	(5.7)x

DKK m	9M 2016	9M 2015
Operating cash flow	2,093	(1,868)
Free cash flow	1,889	(3,300)
Net cash flow	371	(2,313)
Cash	1,785	1,334
Net interest-bearing debt	575	2,918
Net debt/EBITDA	0.2x	117.2x

Cash flow drivers:

- ★ Strong improvement in profitability
- ★ Improved working capital
- ★ Provisions reduced by spend on restructuring
- ★ Net interest-bearing debt expected to be around zero at year-end

2016 financial guidance increased

Financial guidance 2016

	Revised 2016 guidance	Previous 2016 guidance
Revenue	DKK 15.3-15.7bn	DKK 14.6-15.0bn
Reported EBIT	DKK 2.1-2.3bn	DKK 1.5-1.7bn

Expected drivers of future revenue and profit performance

- ★ Continued growth in key products primarily driven by demand
- ★ Pace of erosion on products such as Xenazine and Sabril
- ★ Continued gains from operational efficiencies
- ★ No acquisitions, milestones or up-front payments included

PATIENTS
FOCUSED
PASSIONATE
RESPONSIBLE
INNOVATION
DEPRESSION
GLOBAL
ALZHEIMER'S
SCHIZOPHRENIA
PARKINSON'S
LEADERSHIP
PROFITABILITY ORGANIZATION

2015 - CNS market overview

	Market size (2015)				Unmet medical needs	Market leaders (2015)	
	Value (USDbn)	Value Growth	Volume Growth	# of patients*		Compound	Share value
Total pharma	945	+1%	+2%	-	-	-	-
Total CNS	134	-3%	+1%	-	-	-	-
Anti-Alzheimer's (N7D)	5.3	-14%	+3%	>7 million ²	<ul style="list-style-type: none"> • Disease modifying treatment • Disease slowing agents • Improved symptomatic treatments • Longer lasting symptomatic treatments 	1. Memantine 2. Rivastigmine 3. Donepezil 4. Galantamine	50% 23% 21% 6%
Anti-depressants (N6A)	13.2	-15%	+5%	~40 million ²	<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 	1. Duloxetine 2. Escitalopram 3. Bupropion 4. Venlafaxine	16% 10% 10% 9%
Anti-Parkinson's (N4A)	4.0	-10%	+3%	>3 million ²	<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 	1. Rasagiline 2. Levodopa 3. Pramipexole 4. Rotigotine	16% 14% 14% 10%
Anti-psychotics (N5A)	21.5	-7%	+3%	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 	1. Aripiprazole 2. Quetiapine 3. Paliperidone Palmitate 4. Olanzapine	35% 14% 10% 9%

Source: IMS Health Analytics Link 2016 (Audited sales), Growth, USD % y/y

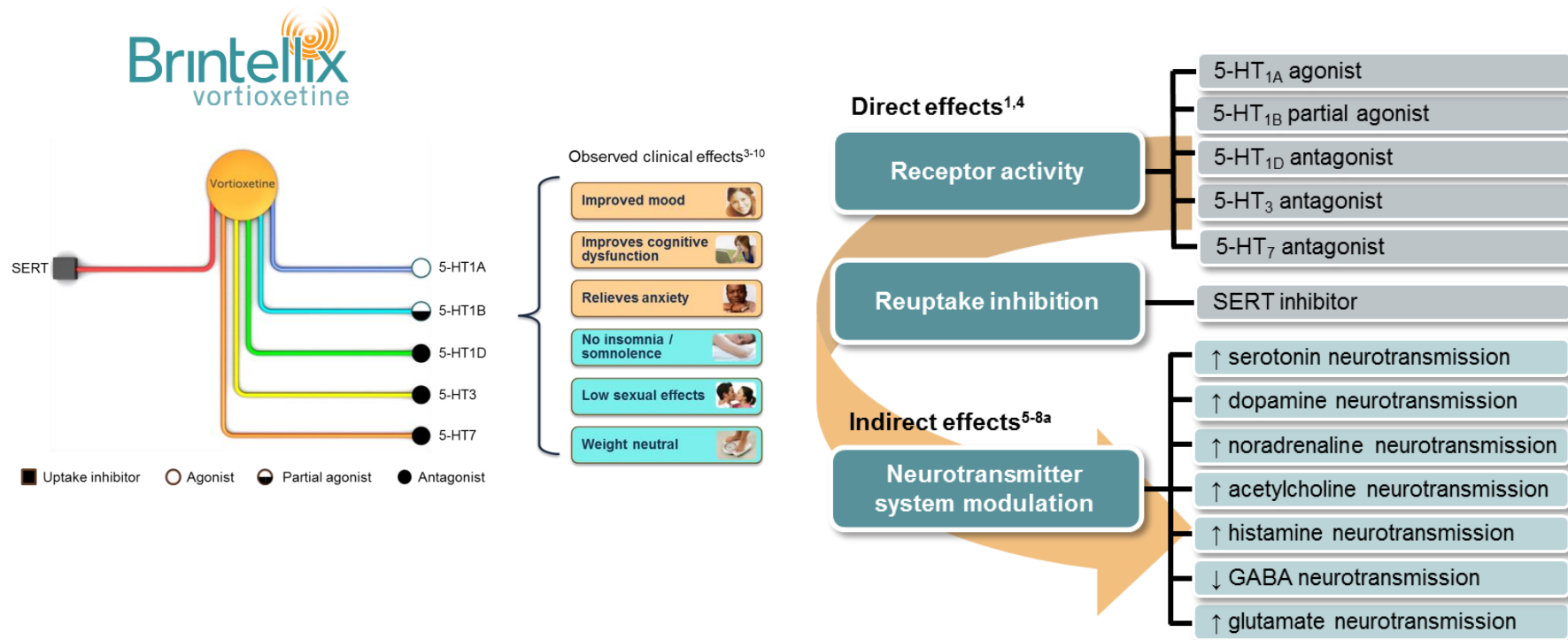
Supply operations



Brintellix (vortioxetine, Lu AA21004)



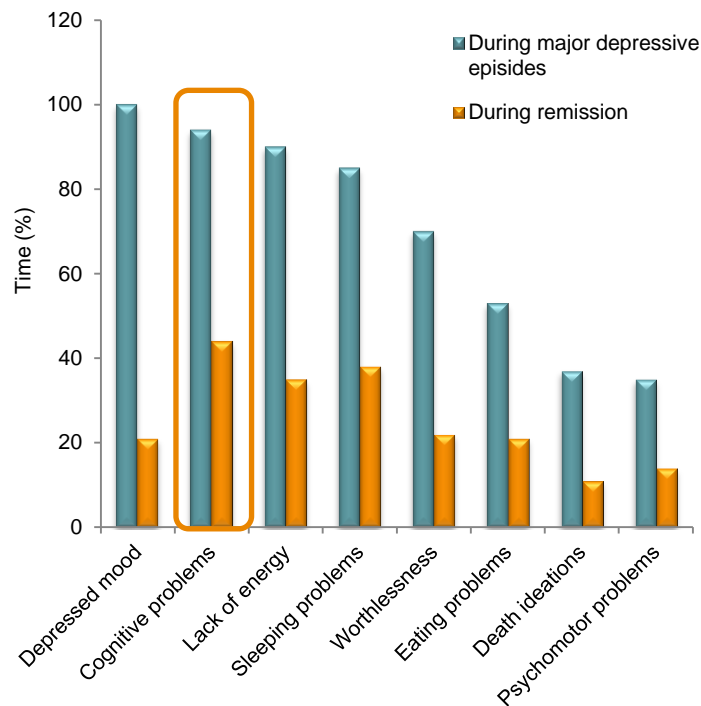
Brintellix has a distinct pharmacological profile



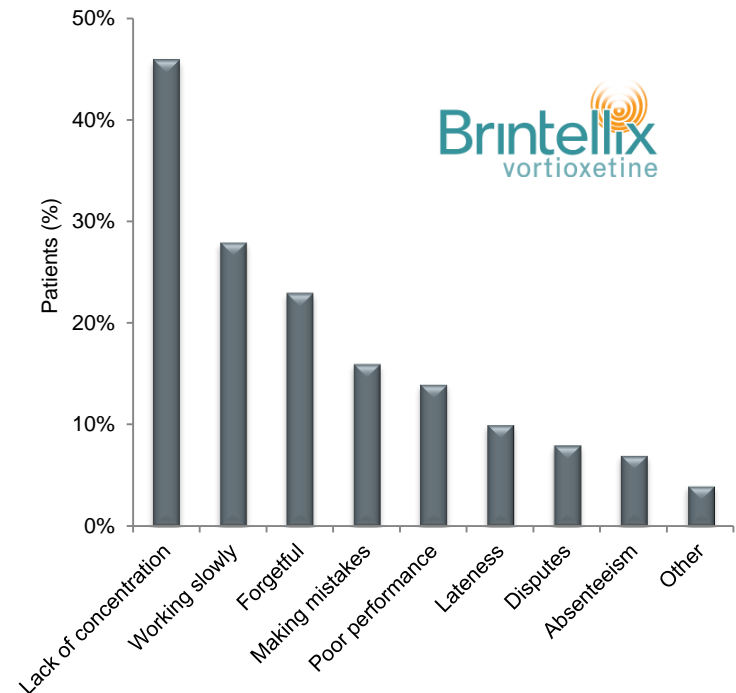
1. Bang-Anderson 2011; 2. Mørk 2012; 3. H. Lundbeck A/S 4. Alvarez 2012;
5. Katona 2012; 6. Baldwin 2012; 7. Heningsberg 2012; 8. Boulenger 2012; 9. Vortioxetine SPC; 10. Bidzan 2012

Cognitive symptoms of depression are frequent and affect work productivity

- ★ Cognitive symptoms (difficulty concentrating, planning, decision making and forgetfulness) are very prevalent and have a direct impact at the workplace¹⁾




- ★ Percentage of patients with MDD experiencing work-related cognitive dysfunction²⁾



1. Conradi HJ et al. Psychol Med 2011;41:1165-1174;
2. Adelphi Neurosis DSP VIII, 2009

Newer products


Northera[™]
(droxidopa) Capsules
100 mg • 200 mg • 300 mg


Onfi[™]
(clobazam)[®]
5, 10, and 20 mg Tablets

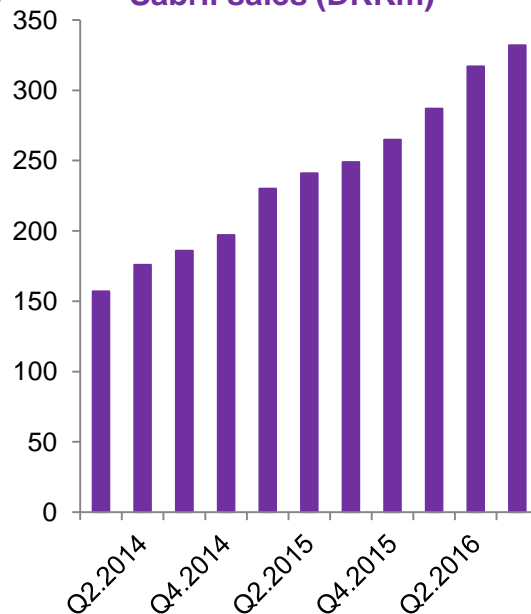

Sabril[®]
vigabatrin
500 mg tablet
500 mg powder for oral solution

Sabril – launched in Q3 2009 and reached DKK 936 million - up 30% in 9M 2016

Refractory complex partial seizures (rCPS):

- ★ ~1 million patients in the US suffer from CPS
 - ★ 30-36% of patients are refractory
- ★ Poorly controlled by current therapies
- ★ Uncontrolled seizures has ~40x higher risk of inflicting mortality

Sabril sales (DKKm)



Infantile spasms (IS):

- ★ ~2,500 patients/year in the US with IS
- ★ Serious disease with substantial unmet medical need
 - ★ 70-90% suffers from mental retardation, mortality of around 5%

Sabril[®]
vigabatrin
500 mg tablet
500 mg powder for oral solution

Otsuka collaborations (Rexulti and Abilify Maintena)



Financial terms and territory structure of the Otsuka alliance

- ★ Co-development and co-commercialization agreements with Otsuka in November 2011
- ★ Idalopirdine added to the alliance in March 2013
- ★ Selincro for Japan added to the alliance in October 2013

Milestone payments

Payment to:



	Abilify Maintena	Rexulti	Idalopirdine	Selincro
Development milestones/upfront	USD 200m	USD 600m ³⁾	USD 150m	EUR 105m*
Approval milestones	USD 275m ¹⁾	USD 300m ²⁾	USD 300m ⁴⁾	Un-disclosed
Sales milestones	Up to USD 425m depending on sales development		Up to USD 375m depending	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

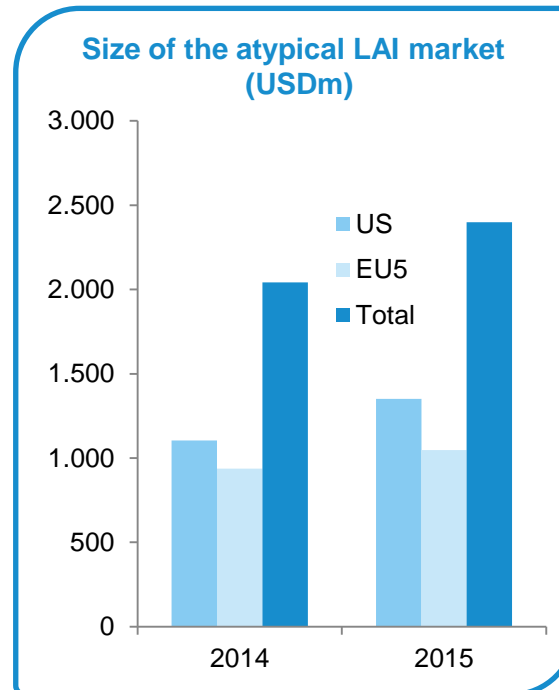
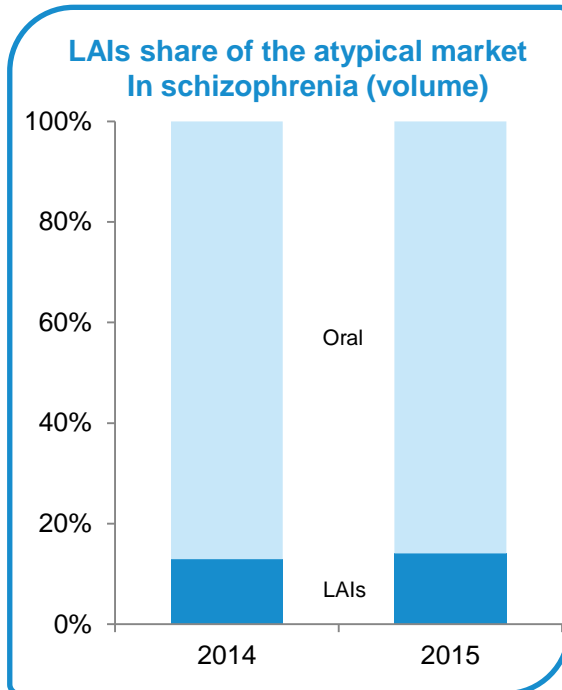
	Abilify Maintena	Rexulti	Idalopirdine	Selincro
USA	20%	45%	55%	-
EU-5, Nordic and Canada	50%	50%	50%	-
Other Lundbeck territories	65%**	65%**	~50%***	Un-disclosed

* Includes sales milestones

** All regions except Asia, Turkey and Egypt

*** All regions except Thailand and Vietnam

The long-acting injectables (atypicals) in schizophrenia – 2015 vs. 2014



- ★ Sales of atypicals in schizophrenia was USD 5.9bn in 2015,...
- ★ ...of which the LAIs constituted USD 2.4bn
- ★ In volume 18.5% and 9.6% have been converted in EU and the US respectively
- ★ The LAI market grew 13% and 17% y/y in volume and value, respectively
- ★ Abilify Maintena's value share was 13.5% in 9M 2016

Source: Decision Ressource (data is US and EU5)
LAI = Long-Acting Injectable anti-psychotics)



The balance of Rexulti - a real opportunity to differentiate from existing treatments



Mechanism of action: Novel D₂/D₃ receptor partial agonist; 5-HT_{1A} partial agonist; 5-HT_{2A} antagonist

ACTIVATING SIDE EFFECTS:

- ★ Hyper-dopaminergic state
- ★ Akathisia, agitation, anxiety, insomnia
- ★ Aripiprazole – 25% akathisia¹⁾

SEDATING SIDE EFFECTS:

- ★ Hypo-dopaminergic state
- ★ Sedation, somnolence, fatigue, lethargy
- ★ Quetiapine fumarate – 37% somnolence²⁾

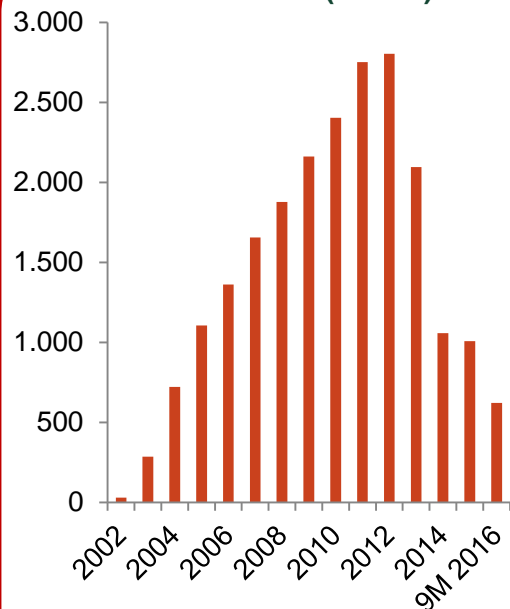
In the US, two antipsychotics are approved for adjunctive therapy in MDD

1) Abilify prescribing information. 2) Seroquel XR prescribing information

Alzheimer's and Parkinson's disease

Lundbeck in Alzheimer's disease (AD)

Ebixa sales (DKKm)



Ebixa
memantine



Idalopirdine

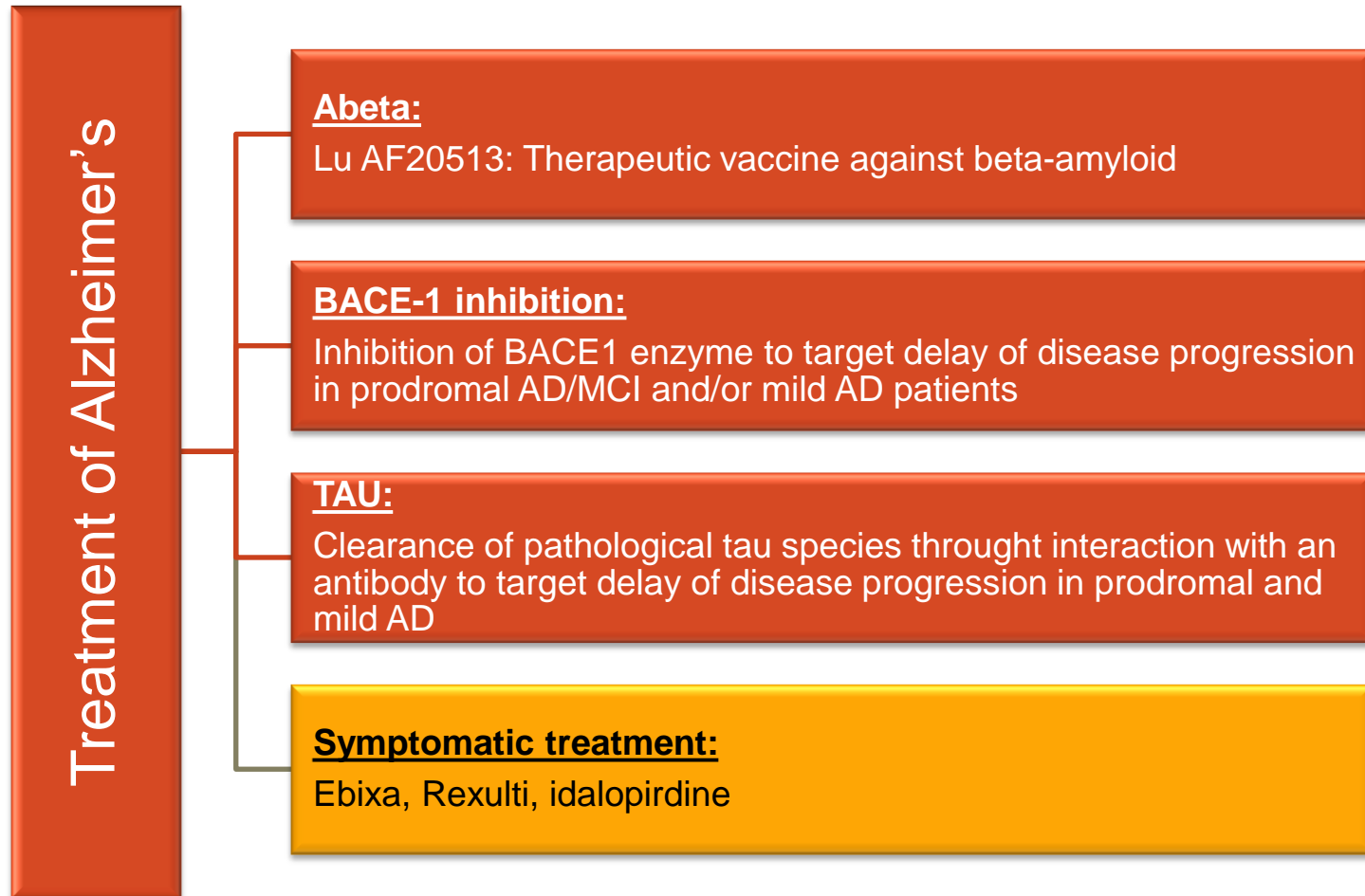
BACE

TAU

Lu AF20513

- ★ Lundbeck launched **Ebixa** in 2002
- ★ Ebixa peaked at **27%** of the European market
- ★ **Idalopirdine** and **Rexulti** to address symptoms of Alzheimer's
- ★ Therapeutic vaccine against beta-amyloid, **Lu AF20513**
- ★ Other concepts in early development

Lundbeck is active in the investigation of various novel treatment concepts



The clinical phase III programme on idalopirdine

		Design	Idalopirdine (mg/day)	Donepezil (mg/day)	Primary Endpoint Scale	No. of patients
NCT01955161 (<i>STARSHINE</i>)	24 weeks	Randomized, DB, PBO, parallel- group, fixed-dose	30 and 60mg (QD)	10	ADAS-cog (#)	~930 (Study start: 10/2013)
NCT02006641 (<i>STARBEAM</i>)	24 weeks	adjunctive treatment to donepezil	10 and 30mg (QD)	10	ADAS-cog (#)	~850 (Study start: 02/2014)
NCT02006654 (<i>STARBRIGHT</i>)	24 weeks	AChEIs	60 (or 30mg) (QD)	-	ADAS-cog (#)	~720 (Study start: 03/2014)
NCT02079246* (<i>STAR Extension</i>)	32 weeks	Adj. to donepezil	60 (or 30mg) (QD)	10	AEs Withdrawals	1,770 (Study start: 04/2014)
NCT01019421 (phase II)	24 weeks	Adj. to donepezil	90mg (TID)	10	ADAS-cog	278 (Study start: 12/2009)
NCT00810667 (phase II)	12 weeks	Adj. to risperidone	120mg (BID)	-	PANSS	124 (schizophrenia) (Study start: 11/2008) (Study comp.: 02/2010)

DB: double-blind; PBO: placebo-controlled

*) Patients that conclude *STARSHINE* or *STARBEAM* can be included in a long-term open label study - NCT02079246. #) Both Activities of Daily Living Inventory (ADCS-ADL23) total score and Clinical Global Impression of Change (ADCS-CGIC) score included as secondary endpoints

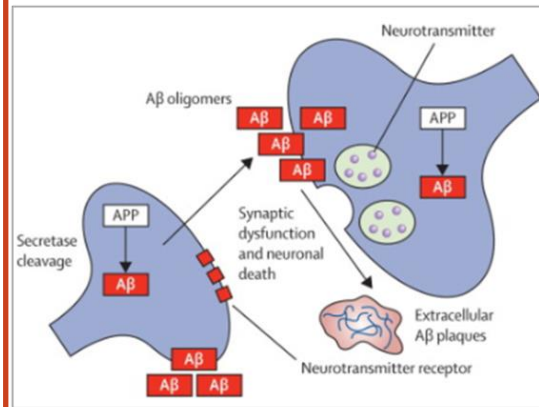
Lu AF20513 – getting beyond symptomatic treatment

Wanted from study

- ★ Low level of ARIA-E and ARIA-H²⁾
- ★ No meningo-encephalitis
- ★ High antibody responder rate
- ★ Fast antibody response (< 6 months)
- ★ High affinity A β specific antibodies (for CNS clearance)

Not wanted from study

- ★ A β specific T-cells
- ★ High IgM over IgG ratio
- ★ Very low responder rate



Phase I study¹⁾

- ★ 35 patients from centres in Europe
- ★ Patients with mild AD (MMSE 19-26)
- ★ Four injections of Lu AF20513
- ★ Purpose:
 - ★ Evaluate safety and tolerability
 - ★ Measure A β -specific antibody titer
- ★ Expected completion: mid-2017

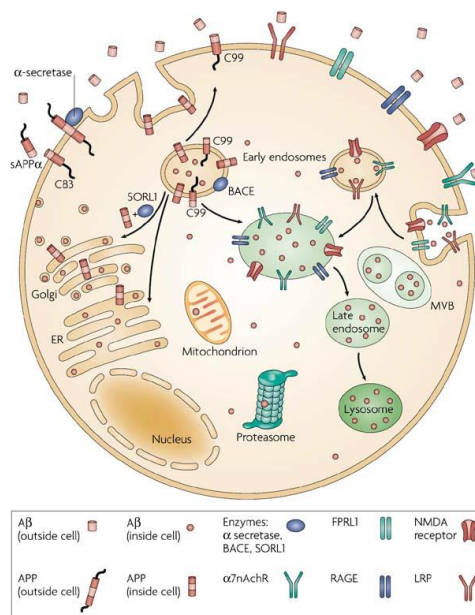
1) NCT02388152

2) Amyloid Related Imaging Abnormalities (ARIA): ARIA-E refers to the MR signal alterations thought to represent vasogenic edema (VE) and related extravasated fluid phenomena. ARIA-H refers to the MR signal alterations attributable to microhemorrhages (mH) and hemosiderosis

BACE-1 inhibition – to stop the production of β -amyloid, aimed at slowing the disease progression

BACE¹⁾

- ★ BACE was identified in 1999²⁾
- ★ Enzyme that initiates the production of the Alzheimer's associated peptide A β



BACE-1 project

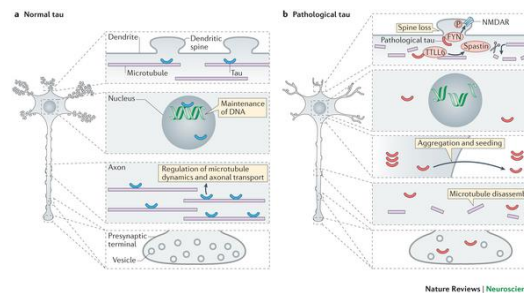
- ★ Disease modifying treatment for AD that fits well Lundbeck's expanding AD portfolio
- ★ FHD in preparation

1) β -amyloid precursor protein site cleaving enzyme (BACE). 2) Vassar, R. *et al.* b-secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE. *Science* **286**, 735–741 (1999) . *Nature Reviews Neuroscience* 8, 499-509 (July 2007)

Increasing evidence suggests abnormal tau and amyloid work together to cause nerve cell death

Tau protein

- ★ Tau, a microtubule-associated protein first discovered in 1975
- ★ In a healthy brain, tau has an important function, acting as a form of 'scaffolding' to keep cells stable, but in Alzheimer's, tau loses its normal form and breaks away from the cell



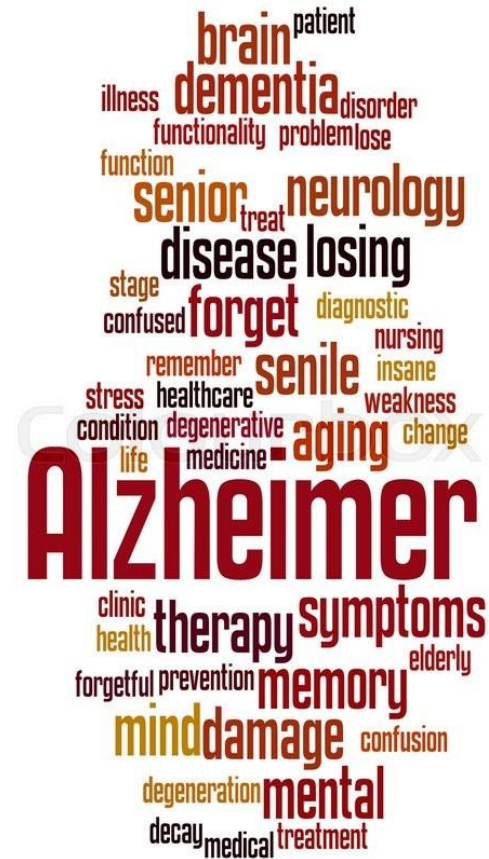
Tau-Ab

- ★ Tau aggregation inhibition for the treatment of Alzheimer's
- ★ FHD in preparation

Source: Nature Reviews Neuroscience 17, 22–35

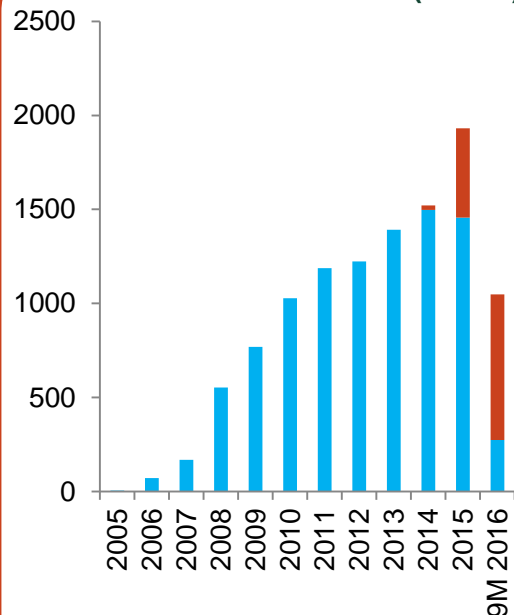
Broad-based Alzheimer's pipeline

- ★ **Idalopirdine** demonstrated positive phase II results as add-on to donepezil in moderate Alzheimer's, but first out of three pivotal studies reported weak efficacy profile
 - ★ Phase III commenced in October 2013
- ★ **Rexulti** in patients with agitation associated with dementia of the Alzheimer's type
 - ★ Phase III commenced in July 2013
- ★ **Lu AF20513** to be the next generation active vaccination with potential to modify disease progression
 - ★ An active anti-A β vaccine candidate
 - ★ Phase I commenced in Q1 2015
- ★ Early-stage portfolio maturing



Lundbeck in Parkinson's disease (PD)

Azilect + Northera sales (DKKm)



AZILECT[®]
(rasagiline tablets)
Once-Daily

Northera[™]
(droxidopa) capsules
100 mg • 200 mg • 300 mg

Lu AE04621

LRRK2

Anti- α -syn Ab

- ★ Lundbeck launched Azilect (ex-US) in 2005 and Northera (US) in 2014
- ★ Movement disorder franchise further bolstered by Xenazine (US) for Huntington's chorea
- ★ In 2016, Azilect (EU) was handed back to Teva

Lu AE04621 might offer Parkinson's patients a higher level of disease control

Lu AE04621

- ★ Dopaminergic receptor agonist and a prodrug to the pharmacologically active catecholamine Lu AA40326
- ★ Potential oral treatment of Parkinson's disease
- ★ Likely alternative to *Apokyn*, subcutaneous apomorphine, with the intention of delaying treatment with levodopa and consequently deferring the onset of complications

A word cloud centered around the word "Dopamine". Other prominent words include "disorder", "parkinson", "degenerative", "tremors", "disease", "therapy", "damage", "neurology", "stiffness", "process", "diagnostic", "stage", "dementia", "treatment", "brain", "weakness", "disability", "function", "rehabilitation", "ageing", "shaking", "mental", "life", "decay", "confusion", "medicine", "healthcare", "illness", "change", "rigidity", "mind", "elderly", "old", "medical", "stress", "nursing", "clinic", "senior".

The study¹⁾

- ★ Phase I study started in the US in January 2016
- ★ 24 patients

Primary outcome measures:

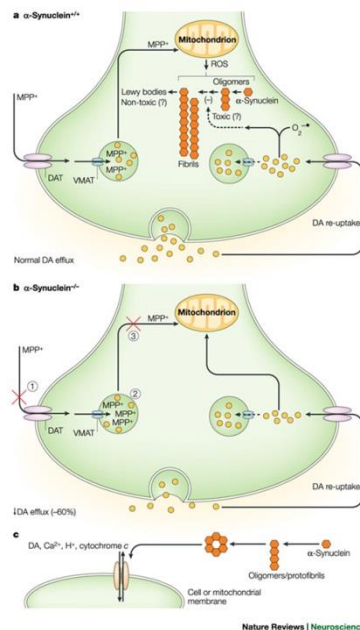
- ★ Safety and tolerability
- ★ Time to onset of "ON" time
- ★ Duration of "ON" time
- ★ Estimated completion date: 12/2016

1) NCT02649608

Alpha-synuclein – a potential therapeutic Parkinson's vaccine

Alpha-synuclein

- ★ A role for α -synuclein in PD was first suggested in 1997
- ★ Propagation of α -synuclein misfolding and aggregation seems to be at the heart of most types of Parkinson's
- ★ Many preclinical studies suggest that α -synuclein can behave in a prion-like fashion, with misfolding and aggregation, and propagation from neuron to neuron
- ★ This chain of events presents many opportunities for therapeutic intervention



Anti- α -syn Ab

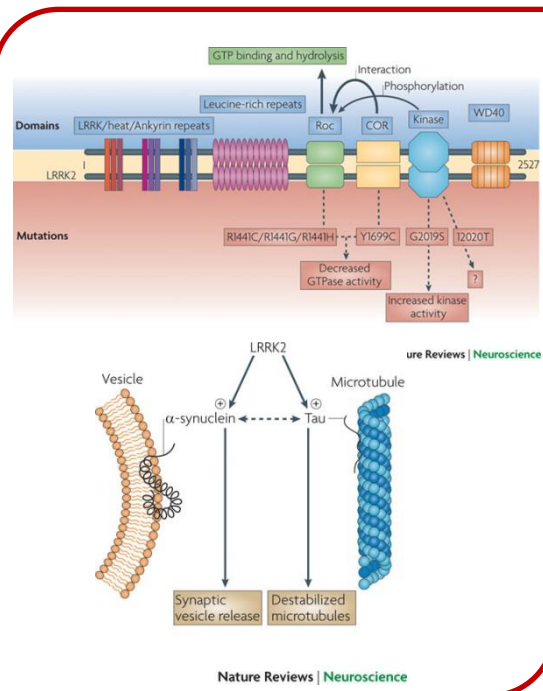
- ★ Collaboration with Genmab entered in 2010
- ★ Clearance of pathological α -synuclein via antibody – objective to delay disease progression in symptomatic PD
- ★ A treatment that could slow or stop Parkinson's progression
- ★ FHD in preparation



The role of leucine-rich repeat kinase 2 (LRRK2) or dardarin in Parkinson's

LRRK2

- ★ Discovered in 2004
- ★ Inhibition of LRRK2 kinase to delay disease progression in early stage PD with focus on genetic identified patients
- ★ LRRK2 is widely expressed in many organs and tissues including the brain
- ★ LRRK2 might act upstream of α -synuclein and its aggregation in Lewy bodies
- ★ Personalised medicine?



Drug discovery collaborations

- ★ In December 2010, Lundbeck signed agreements with Zenobia Therapeutics and Vernalis plc
- ★ Lundbeck utilizes Zenobia's expertise in protein expression and x-ray crystallography for the LRRK2 target
- ★ The Vernalis agreement focused on a drug discovery collaboration utilising Vernalis' fragment and structure-based drug discovery platform

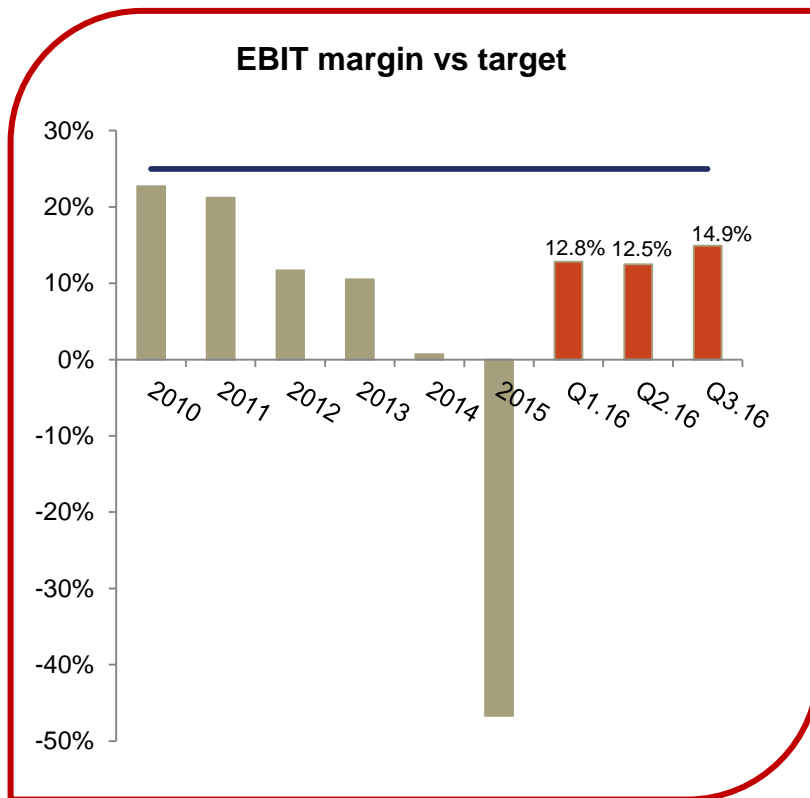
Mark R. Cookson; The Lancet Neurology; December 2010, vol. 11. Nature Reviews Neuroscience 11, 791-797 (December 2010)



Finance & other



Lundbeck's EBIT margin vs. long-term target



- ★ Strong improvement in EBIT margin
- ★ Margin benefits are coming faster than expected
- ★ Strong margin improvement sustainable

Continued margin improvements:

- ★ Effects from restructuring programme
- ★ Growth in key products with higher margins
- ★ Erosion of low-margin products such as Azilect and Xenazine

9M and Q3 2016 - Geographic distribution of revenue - 1

DKKm	9M 2016	9M 2015	Q3 2016	Q3 2015	Growth	Growth in local currency	FY 2015
USA:							
Abilify Maintena	322	232	107	86	23%	23%	324
Trintellix	415	278	153	110	40%	45%	403
Northera	774	283	325	135	142%	142%	475
Onfi	1,773	1,241	645	448	44%	37%	1,757
Rexulti	555	58	246	58	324%	324%	117
Sabril	936	720	332	249	33%	34%	985
Xenazine	1,170	1,643	355	530	(33%)	(38%)	2,182
Other pharmaceuticals	90	95	32	52	(39%)	(38%)	110
Total revenue	6,035	4,550	2,195	1,668	32%	27%	6,353

9M and Q3 2016 - Geographic distribution of revenue - 2

DKKm	9M 2016	9M 2015	Q3 2016	Q3 2015	Growth	Growth in local currency	FY 2015
EUROPE:							
Abilify Maintena	375	185	123	77	60%	64%	281
Brintellix	153	59	58	35	66%	58%	105
Cipralex	575	697	196	213	(8%)	(7%)	893
Other pharmaceuticals	1,096	1,983	369	647	(43%)	(42%)	2,617
Total revenue	2,199	2,924	746	972	(23%)	(23%)	3,896
INTERNATIONAL MARKETS:							
Abilify Maintena	108	41	41	18	126%	125%	64
Azilect	86	130	29	43	(33%)	(33%)	175
Brintellix	205	81	80	35	126%	134%	121
Cipralex/Lexapro	1,333	1,322	379	323	18%	8%	1,698
Ebixa	378	448	113	126	(9%)	(4%)	576
Other pharmaceuticals	878	951	313	287	8%	10%	1,193
Total revenue	2,988	2,973	955	832	15%	13%	3,827

Q3 2016 - Cash generation

DKKm	Q3 2016	Q3 2015	FY 2015
Cash flows from operating activities	1,301	(102)	197
Cash flows from investing activities	(108)	(1,396)	(2,842)
Cash flows from operating and investing activities	1,193	(1,498)	(2,645)
Cash flows from financing activities	(844)	1,063	501
Net cash flow for the period	349	(435)	(2,144)
Cash and bank balances, end of period	1,785	1,334	1,504
Securities	17	17	17
Interest-bearing debt	(2,377)	(4,269)	(3,770)
Interest-bearing debt, cash, bank balances and securities, net end of period	(575)	(2,918)	(2,249)

Q3 2016 - Balance sheet

DKKm	30.09.16	31.12.15
Intangible assets	8,719	9,794
Other non-current assets	3,854	3,871
Current assets	7,459	7,660
Assets	20,032	21,325
Equity	9,159	8,785
Non-current liabilities	3,287	4,792
Current liabilities	7,586	7,748
Equity & liabilities	20,032	21,325
Cash and bank balances	1,785	1,504
Securities	17	17
Interest-bearing debt	(2,377)	(3,770)
Interest-bearing debt, cash, bank balances and securities, net end of period	(575)	(2,249)

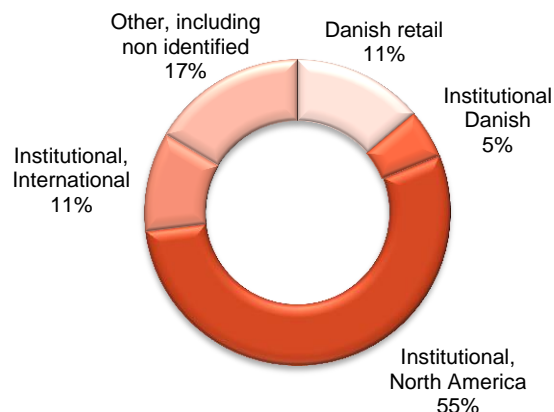
Costs - annual figures

DKKm	Growth, Y/Y, %				
	2015	2014	2013	2015	2014
Revenue	14,594	13,468	15,258	8%	(12%)
Cost of sales	5,395	4,160	4,038 ³⁾	30%	3%
Sales and distribution costs	6,706	5,164	4,530	30%	14%
Administrative expenses	1,160	1,134	2,140 ⁴⁾	2%	(47%)
R&D	8,149	2,911 ²⁾	2,951	180%	(1%)
Total costs	21,410¹⁾	13,369	13,659	60%	(2%)
EBIT	(6,816)	99	1,599	-	(94%)
Core EBIT	847	1,228	2,282	(31%)	(46%)
<i>Cost of sales</i>	37%	31%	26%		
<i>Sales and distribution costs</i>	46%	38%	31%		
<i>Administrative expenses</i>	8%	8%	14%		
<i>R&D</i>	56%	22%	19%		
<i>EBIT-margin</i>	(47%)	1%	10%		

Included are 1) Restructuring costs of DKK 7bn. 2) writedown of desmoteplase of DKK 309m; 3) writedown of Sycrest of DKK 210m; 4) EU fine of DKK 700m and restructuring charge of DKK 200m

Ownership and the Lundbeck Foundation

Composition of free float ownership (end 2015)



- ★ Free float is 30%
- ★ Free float of approximately 60m shares is traded approximately once over annually

LUNDBECKFONDEN

- ★ Commercial foundation established in 1954 by Grete Lundbeck, widow of the founder
- ★ The main objective is to
 - ★ Maintain and expand the activities of the Lundbeck Group
 - ★ Provide financial support for research of the highest quality in biomedical and natural sciences
- ★ Ownership and value (2015):
 - ★ **Lundbeck** (70%): DKK 32,333m
 - ★ **ALK-Abello** (42%/69%): DKK 3,574m
 - ★ **Falck** (57%): DKK 3,422m
 - ★ **LundbeckFond Invest**: DKK 13,937m
 - ★ **Ventures & Emerge**: DKK 2,173m

For more information please contact Investor Relations

Share information

Lundbeck's shares are listed on the stock exchange in Copenhagen under the symbol "LUN".

Lundbeck has a sponsored Level 1 ADR programme listed in the US (OTC) under the symbol "HLUYY".

For additional company information, please visit Lundbeck at: www.lundbeck.com

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palo@lundbeck.com or [polesen3@bloomberg.net](https://www.bloomberg.com/profile/person/111111111)

Financial calendar

Q4 2016 and Annual Report 2016	8 February 2017
Annual General Meeting	30 March 2017
Q1 2017	10 May 2017
Q2 2017	9 August 2017
Q3 2017	8 November 2017

Thank you!

Lundbeck

