Brintellix (vortioxetine, Lu AA21004)

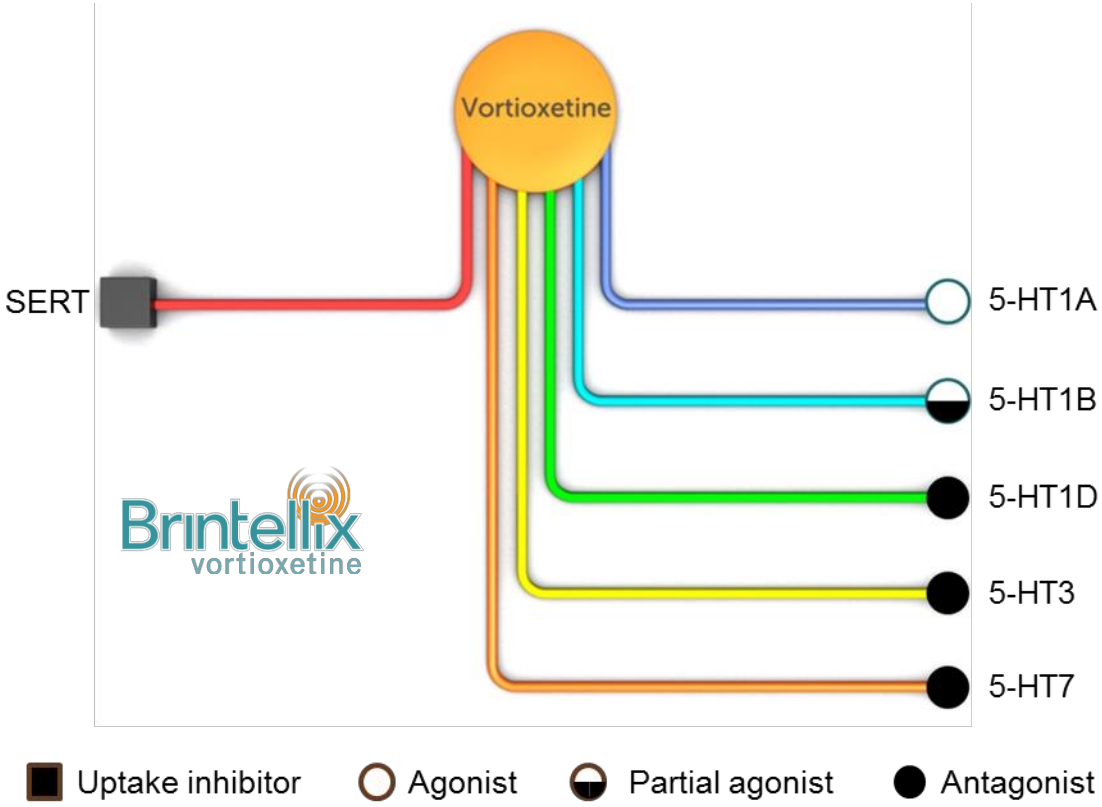
Despite progress and wide range of available therapies, no current therapy addresses all needs

UNMET NEEDS IN DEPRESSION

- Inadequate treatment response in many patients, despite treatment switches[1]
- Cognitive symptoms in depressed patients are not adequately treated with current antidepressants[2-4]
- Nausea, sexual dysfunction, insomnia and weight gain are common tolerability issues with e.g. SSRIs and SNRIs[5-8]

1. Rush AJ et al. 2006; 2. Uher R *et al.* 2012; 3. Wihall A *et al.* 2009; 4. Jaeger J *et al.* 2006; 5. Bull 2002; 6. Kelly 2008; 7. Cassano 2004; 8. Masand 2003

Brintellix has a distinct pharmacological profile



Observed clinical effects[3-10]

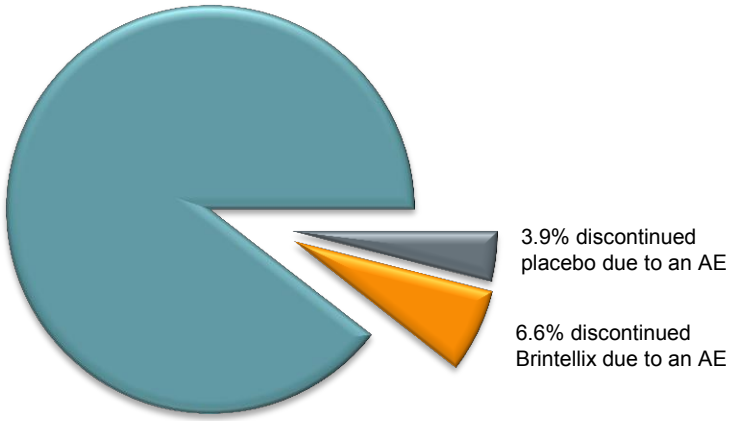
- Improved mood
- Improves cognitive dysfunction
- Relieves anxiety
- No insomnia / somnolence
- Low sexual effects
- Weight neutral

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

Brintellix was well tolerated across the large clinical trial program

The tolerability profile of Brintellix was established in a robust program of clinical trials involving >7,500 patients[1]

- In clinical trials the **most common** adverse event was nausea[2]
- Adverse events were usually **mild or moderate** and occurred within the first two weeks of treatment[2]
- The events were usually **transient** and did not generally lead to cessation of therapy[2]
- **Neutral** on liver and renal assessments, body weight, ECG, and vital signs
- **No QTc**-prolongation in thorough QT study with healthy individuals



Brintellix vortioxetine

1. H. Lundbeck A/S MAA
2. Vortioxetine, Summary of Product Characteristics

Lundbeck

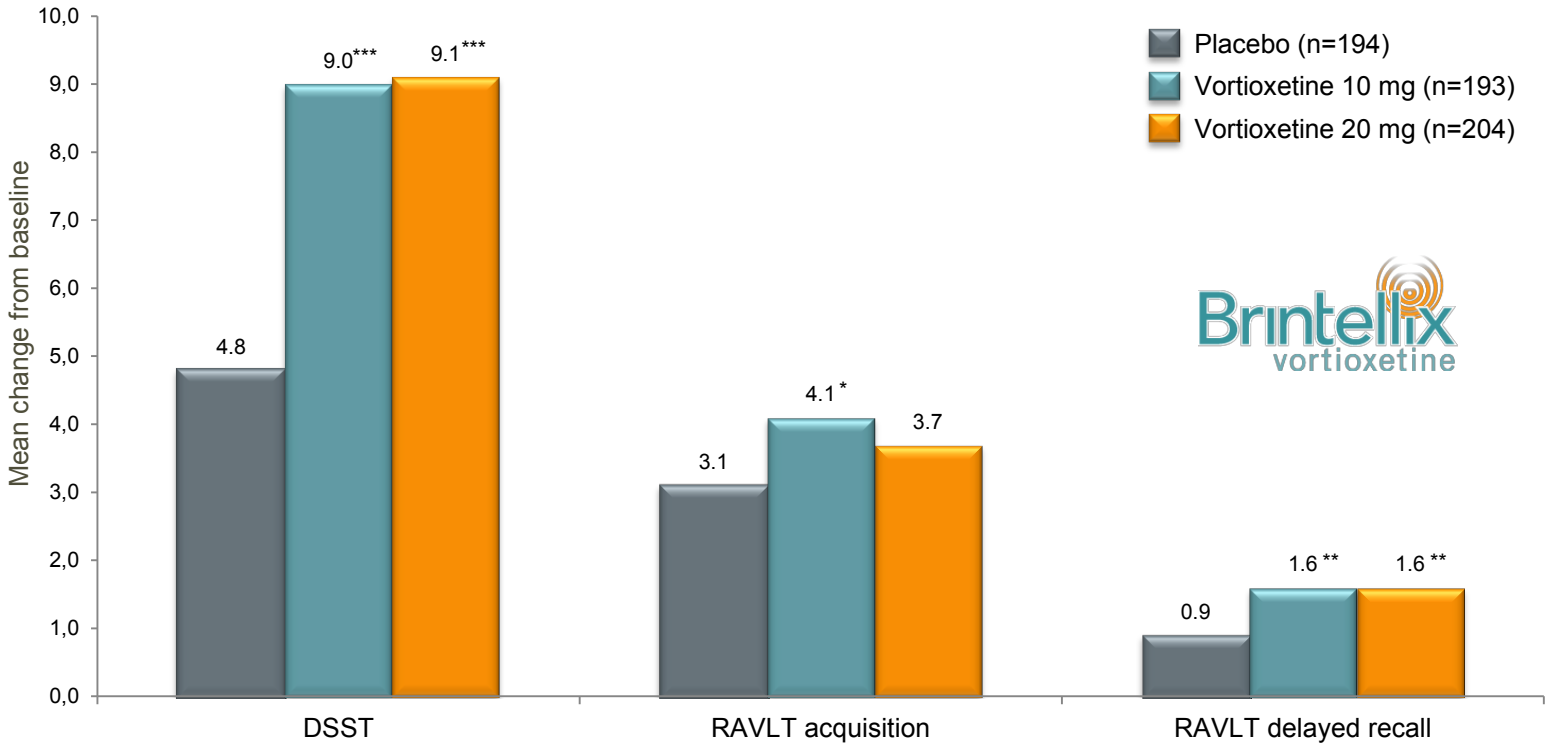
Data support Brintellix for cognitive dysfunction in major depression

- Robust pre-clinical research indicates differentiated profile for Brintellix on measures of cognitive functioning
- Data from two clinical studies support a role for Brintellix in cognitive function associated with major depression
- Further studies ongoing

Brintellix
vortioxetine

FOCUS - Brintellix 10 mg and 20 mg are significantly superior to placebo, according to key cognitive scores

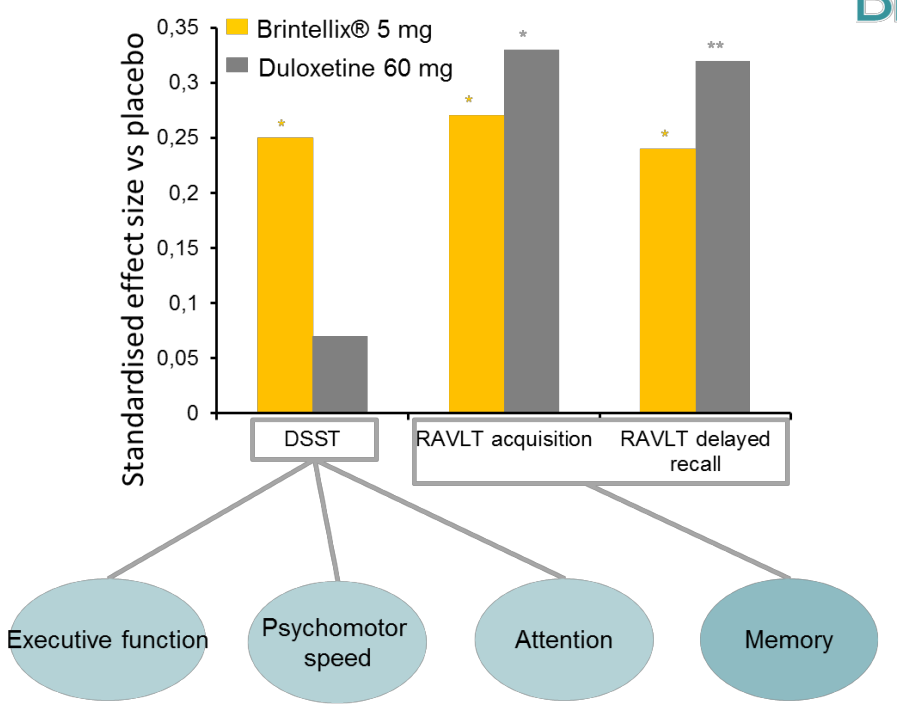
Mean change from baseline to week 8 in DSST, RAVLT acq, and RAVLT delay scores (FAS, MMRM)



*p<0.05, **p<0.01; p<001 vs placebo; nominal p-values (with no adjustments for multiplicity) for RAVLT scores

McIntyre et al. Poster presented at ACNP 2013

Brintellix improved cognitive performance in depressed elderly patients[1]



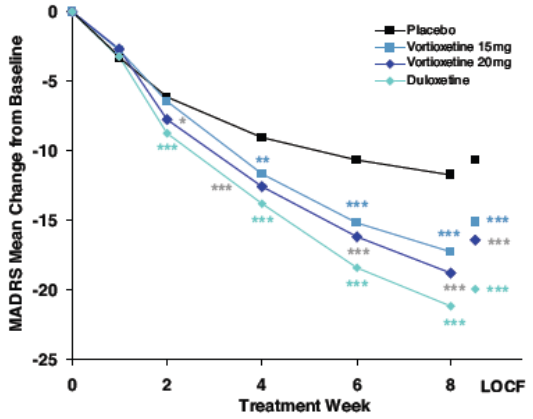
DSST, Digit Symbol Substitution Test; RAVLT, Rey Auditory Verbal Learning Test;

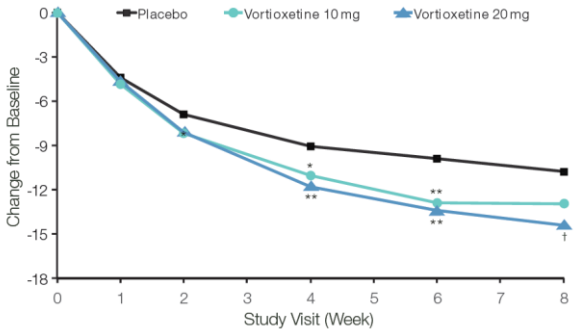
1. Katona C *et al*. Int Clin Psychopharmacol. 2012;27(4):215-23

Brintellix is a new multimodal anti-depressant with robust and broad efficacy

- Efficacious in the treatment of depression in adults, elderly and when used as maintenance treatment to prevent relapse
- Is efficacious in the treatment of depressive symptoms in patients with an inadequate response to SSRI/SNRI
- It leads to improvement in the overall depressive syndrome, including the items of the MADRS, response and remission rates and global clinical impression as measured by the CGI-I
- Improves cognitive function in depressed patients, assessed as performance on the neuropsychological tests DSST and RAVLT
- Improves health-related quality-of-life outcomes (SF-36 MCS), overall health rating (EQ-5D) and overall functioning (SDS)

Brintellix
vortioxetine





Brintellix has a favorable tolerability and safety profile

Brintellix
vortioxetine

- Placebo-level insomnia
- Low incidence of sexual dysfunction
- No weight gain
- No QTc prolongation, and placebo-level effects on blood pressure, heart rate and renal and hepatic assessments
- In clinical studies, the incidence of nausea was low, and nausea was generally mild to moderate and transient
- Brintellix treatment can be stopped abruptly without discontinuation symptoms

Adverse Events (AEs) with an Incidence of ≥5% in any treatment group in the 8-Week treatment period (APTS)

Preferred term	Placebo	Brintellix 15mg	Brintellix 20mg	Duloxetine 60mg
Pts w. TEAEs	50.6%	57.0%	66.2%	65.3%
Nausea	10.1%	26.5%	31.8%	30.6%
Headache	7.6%	10.6%	12.6%	10.9%
Diarrhoea	3.8%	4.0%	7.3%	6.1%
Dry mouth	3.2%	3.3%	6.0%	9.5%
Dizziness	6.4%	4.6%	5.3%	10.2%
Fatigue	2.5%	4.0%	3.3%	5.4%
Hyperhidrosis	3.8%	3.3%	0.0%	7.5%

Source: J.P.Boulenger, APA2013 (Poster NR3-055)

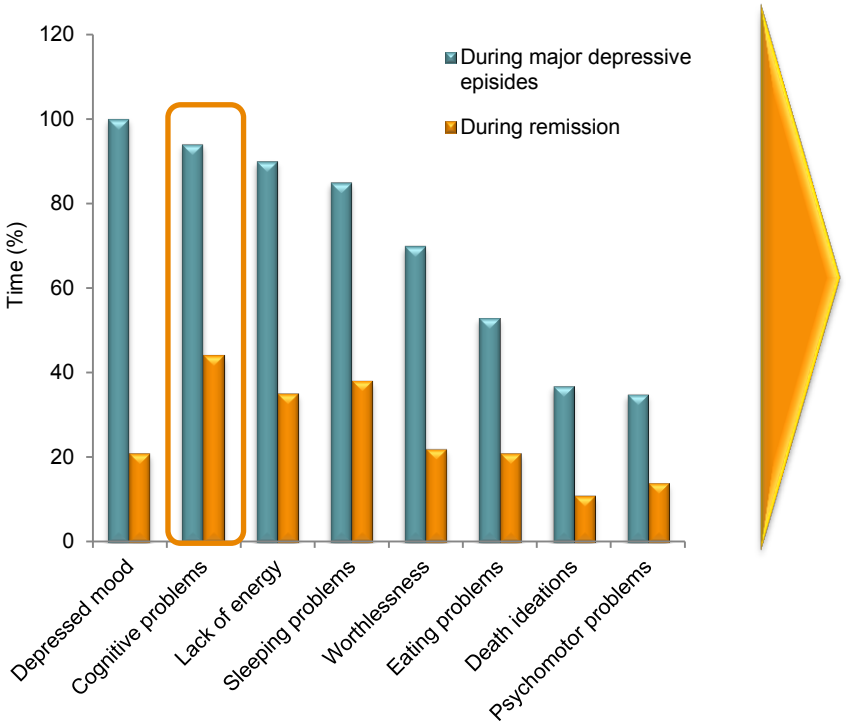
Variable	Placebo	Brintellix 15mg	Brintellix 20mg	Duloxetine 60mg
Number of subjects without sexual dysfunction at baseline				
Δ from PBO	-	-0.7%	-0.7%	17%
Number of subjects with sexual dysfunction at baseline				
Δ from PBO	-	-8.7%	6.3%	1.5%

Source: A.R. Mahableshwarkar, APA2013 (Poster NR9-01)

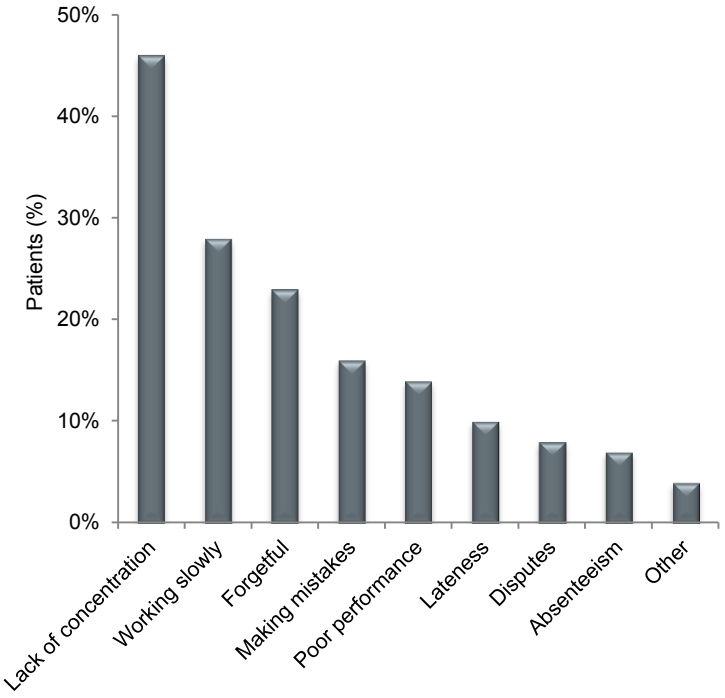
Lundbeck

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 workplace[1)]

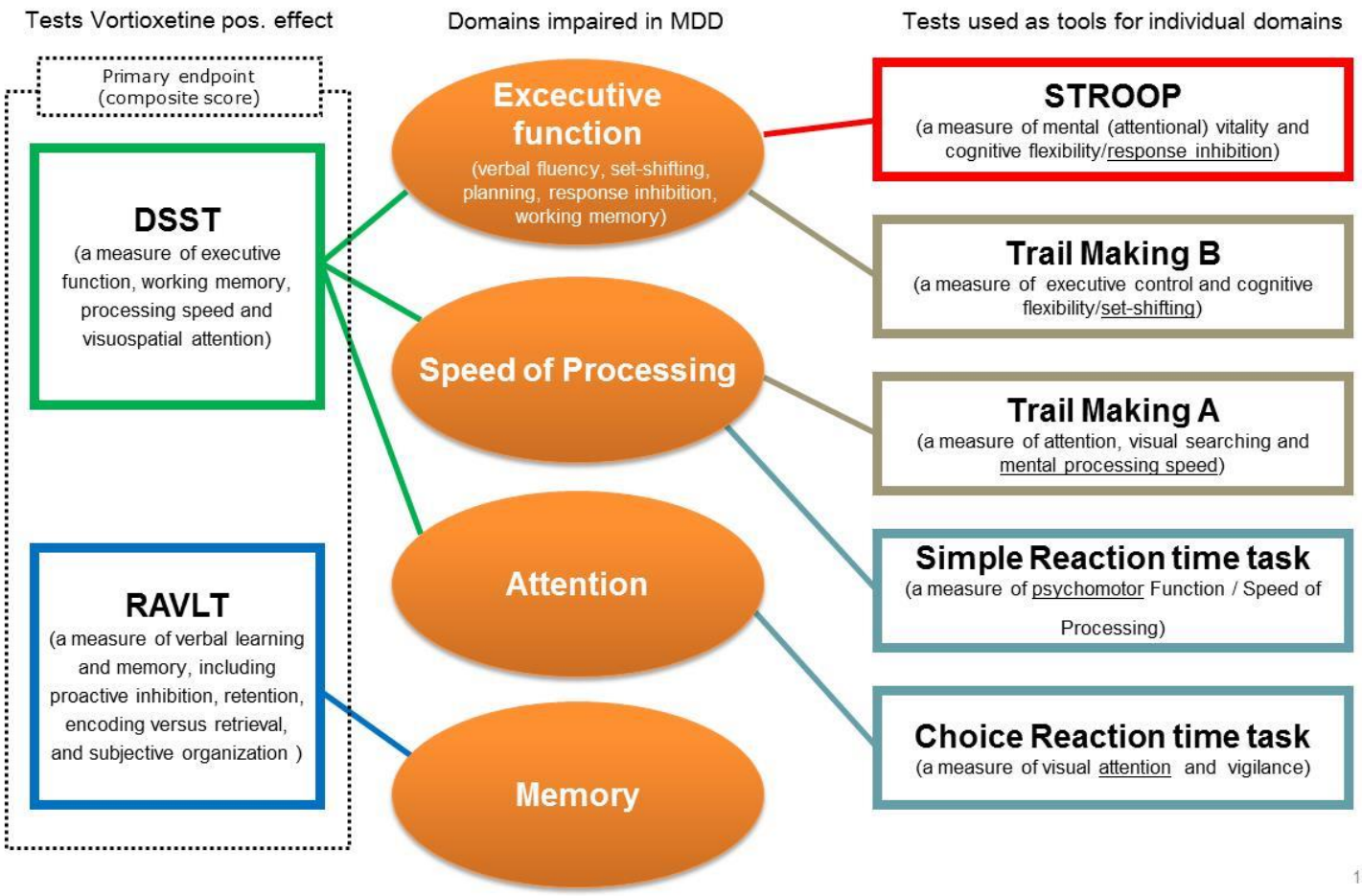


- Percentage of patients with MDD experiencing work-related cognitive dysfunction[2)]



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

Test Selection Strategy to evaluate cognitive performance



Brintellix: Efficacy in patients with inadequate response to SSRI/ SNRI therapy

John LaMattina, Contributor
I cover news on drugs and R&D in the pharma industry
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New Data For Lundbeck's Antidepressant, Brintellix, Provide Insight Into Commercial Strategy

[…] What is interesting, however, is that Brintellix did help patients with MDD who had failed standard therapy. One can't help but surmise that Lundbeck will plan to develop this advantage of Brintellix in both positioning and pricing this drug. […] This strategy differs from what would have been done 15 years ago. Back then, a company with a new antidepressant would have gotten regulatory approval for its new drug and begun marketing it against existing agents in order to compete as a first-line therapy. That strategy is no longer viable in 2013. […] By showing that Brintellix is effective in first-line treatment failures, if it is approved, Lundbeck can have an entry into this patient population who need a treatment alternative.

Significantly better versus agomelatine in patients who switched antidepressant treatment after an inadequate response to SSRI/SNRI treatment