



## Clinical trial results:

**An interventional, randomised, double-blind, parallel-group, placebo-controlled study on the efficacy of vortioxetine on cognitive dysfunction in patients with partial or full remission of major depressive disorder**

### Summary

|                          |                |
|--------------------------|----------------|
| EudraCT number           | 2014-000229-19 |
| Trial protocol           | EE DE FI SK    |
| Global end of trial date | 25 April 2016  |

### Results information

|                                |               |
|--------------------------------|---------------|
| Result version number          | v1 (current)  |
| This version publication date  | 29 March 2017 |
| First version publication date | 29 March 2017 |

### Trial information

#### Trial identification

|                       |        |
|-----------------------|--------|
| Sponsor protocol code | 15905A |
|-----------------------|--------|

#### Additional study identifiers

|                                    |             |
|------------------------------------|-------------|
| ISRCTN number                      | -           |
| ClinicalTrials.gov id (NCT number) | NCT02279953 |
| WHO universal trial number (UTN)   | -           |

Notes:

### Sponsors

|                              |   |
|------------------------------|---|
| Sponsor organisation name    | H. Lundbeck A/S   |
| Sponsor organisation address | Ottiliavej 9, Valby, Denmark, 2500  |
| Public contact               | Lundbeck Clinical Trials, H. Lundbeck A/S,<br>LundbeckClinicalTrials@lundbeck.com |
| Scientific contact           | Lundbeck Clinical Trials, H. Lundbeck A/S,<br>LundbeckClinicalTrials@lundbeck.com |

Notes:

### Paediatric regulatory details

|  |    |
|--|----|
| Is trial part of an agreed paediatric investigation plan (PIP)       | No |
| Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial? | No |
| Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial? | No |

Notes:

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**Results analysis stage**

|  |               |
|--|---------------|
| Analysis stage                                       | Final         |
| Date of interim/final analysis                       | 25 April 2016 |
| Is this the analysis of the primary completion data? | Yes           |
| Primary completion date                              | 25 April 2016 |
| Global end of trial reached?                         | Yes           |
| Global end of trial date                             | 25 April 2016 |
| Was the trial ended prematurely?                     | No            |

Notes:

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**General information about the trial**

Main objective of the trial:

To assess the efficacy of vortioxetine (10 to 20 mg/day) as adjunctive treatment to stable selective serotonin reuptake inhibitor (SSRI) dose versus stable SSRI monotherapy on cognitive performance (focusing on the aspect concerning speed of processing, executive functioning and attention) in patients who are in partial or full remission from their Major Depressive Episode (MDE).

Protection of trial subjects:

The trial was conducted in accordance with the Declaration of Helsinki (2013) and ICH Good Clinical Practice (1996)

Background therapy: -

Evidence for comparator: -

|   |                 |
|---|-----------------|
| Actual start date of recruitment                          | 20 October 2014 |
| Long term follow-up planned                               | No              |
| Independent data monitoring committee (IDMC) involvement? | No              |

Notes:

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**Population of trial subjects****Subjects enrolled per country**

|                                      |             |
|--------------------------------------|-------------|
| Country: Number of subjects enrolled | Slovakia: 9 |
| Country: Number of subjects enrolled | Estonia: 31 |
| Country: Number of subjects enrolled | Finland: 79 |
| Country: Number of subjects enrolled | Germany: 23 |
| Country: Number of subjects enrolled | Serbia: 9   |
| Worldwide total number of subjects   | 151         |
| EEA total number of subjects         | 142         |

Notes:

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**Subjects enrolled per age group**

|   |   |
|---|---|
| In utero                                  | 0 |
| Preterm newborn - gestational age < 37 wk | 0 |
| Newborns (0-27 days)                      | 0 |
| Infants and toddlers (28 days-23 months)  | 0 |
| Children (2-11 years)                     | 0 |
| Adolescents (12-17 years)                 | 0 |

|                      |     |
|----------------------|-----|
| Adults (18-64 years) | 150 |
| From 65 to 84 years  | 1   |
| 85 years and over    | 0   |

## Subject disposition

### Recruitment

Recruitment details: -

### Pre-assignment

Screening details:

In- or out patients who: had achieved either partial or full remission of major depressive disorder (MDD) diagnosed according to DSM-IV-TR™ criteria, had a Hamilton Depression Rating Scale 17-items (HAM-D17) total score  $\leq 10$ , had received SSRI monotherapy for the current MDD, had a Perceived Deficits Questionnaire – Depression (PDQ-D) total score  $> 25$

### Period 1

|                              |                                |
|------------------------------|--------------------------------|
| Period 1 title               | Overall trial (overall period) |
| Is this the baseline period? | Yes                            |
| Allocation method            | Randomised - controlled        |
| Blinding used                | Double blind                   |
| Roles blinded                | Investigator, Subject          |

### Arms

|  |                                 |
|--|---------------------------------|
| Are arms mutually exclusive?           | Yes                             |
| <b>Arm title</b>                       | Vortioxetine 10-20 mg + placebo |
| Arm description: -                     |                                 |
| Arm type                               | Experimental                    |
| Investigational medicinal product name | vortioxetine                    |
| Investigational medicinal product code |                                 |
| Other name                             | Brintellix                      |
| Pharmaceutical forms                   | Tablet                          |
| Routes of administration               | Oral use                        |

Dosage and administration details:

10 or 20mg vortioxetine encapsulated table administered once daily orally. The initial treatment dose of vortioxetine was 10mg/day. Based on the investigator judgement there was a possibility to increase the dose with a 10mg increment to 20mg/day at Week 1.

|  |          |
|--|----------|
| Investigational medicinal product name | Placebo  |
| Investigational medicinal product code |          |
| Other name                             |          |
| Pharmaceutical forms                   | Capsule  |
| Routes of administration               | Oral use |

Dosage and administration details:

Powder filled capsule orally once daily

|  |                |
|--|----------------|
| <b>Arm title</b>                       | SSRI + placebo |
| Arm description: -                     |                |
| Arm type                               | Experimental   |
| Investigational medicinal product name | Escitalopram   |
| Investigational medicinal product code |                |
| Other name                             |                |
| Pharmaceutical forms                   | Tablet         |
| Routes of administration               | Oral use       |

Dosage and administration details:

Escitalopram 5, 10, 15, or 20mg/day; encapsulated tablets, orally at current stable dose

|  |         |
|--|---------|
| Investigational medicinal product name | Placebo |
| Investigational medicinal product code |         |
| Other name                             |         |

|   |                              |
|---|------------------------------|
| Pharmaceutical forms  | Capsule                      |
| Routes of administration  | Oral use                     |
| Dosage and administration details:  |                              |
| Powder filled capsule orally once daily   |                              |
| Investigational medicinal product name  | Citalopram                   |
| Investigational medicinal product code  |                              |
| Other name  |                              |
| Pharmaceutical forms  | Tablet                       |
| Routes of administration  | Oral use                     |
| Dosage and administration details:  |                              |
| Citalopram – 10, 20, 30, or 40mg/day; encapsulated tablets, orally at current stable dose   |                              |
| Investigational medicinal product name  | Sertraline                   |
| Investigational medicinal product code  |                              |
| Other name  |                              |
| Pharmaceutical forms  | Tablet                       |
| Routes of administration  | Oral use                     |
| Dosage and administration details:  |                              |
| Sertraline – 50, 100, 150, or 200mg/day; encapsulated tablets, orally at current stable dose  |                              |
| <b>Arm title</b>  | Vortioxetine 10-20 mg + SSRI |
| Arm description: -  |                              |
| Arm type  | Experimental                 |
| Investigational medicinal product name  | Vortioxetine                 |
| Investigational medicinal product code  |                              |
| Other name  | Brintellix                   |
| Pharmaceutical forms  | Tablet                       |
| Routes of administration  | Oral use                     |
| Dosage and administration details:  |                              |
| 10 or 20mg vortioxetine encapsulated table administered once daily orally. The initial treatment dose of vortioxetine was 10mg/day. Based on the investigator judgement there was a possibility to increase the dose with a 10mg increment to 20mg/day at Week 1. |                              |
| Investigational medicinal product name  | Escitalopram                 |
| Investigational medicinal product code  |                              |
| Other name  |                              |
| Pharmaceutical forms  | Tablet                       |
| Routes of administration  | Oral use                     |
| Dosage and administration details:  |                              |
| Escitalopram 5, 10, 15, or 20mg/day; encapsulated tablets, orally at current stable dose  |                              |
| Investigational medicinal product name  | Citalopram                   |
| Investigational medicinal product code  |                              |
| Other name  |                              |
| Pharmaceutical forms  | Tablet                       |
| Routes of administration  | Oral use                     |
| Dosage and administration details:  |                              |
| Citalopram – 10, 20, 30, or 40mg/day; encapsulated tablets, orally at current stable dose   |                              |
| Investigational medicinal product name  | Sertraline                   |
| Investigational medicinal product code  |                              |
| Other name  |                              |
| Pharmaceutical forms  | Tablet                       |
| Routes of administration  | Oral use                     |
| Dosage and administration details:  |                              |
| Sertraline – 50, 100, 150, or 200mg/day; encapsulated tablets, orally at current stable dose  |                              |

| <b>Number of subjects in period 1</b> | Vortioxetine 10-20 mg + placebo | SSRI + placebo | Vortioxetine 10-20 mg + SSRI |
|---------------------------------------|---------------------------------|----------------|------------------------------|
| Started                               | 50                              | 49             | 52                           |
| Completed                             | 47                              | 44             | 47                           |
| Not completed                         | 3                               | 5              | 5                            |
| Adverse event, non-fatal              | 1                               | 2              | 3                            |
| Lost to follow-up                     | 1                               | -              | -                            |
| Administrative reason                 | 1                               | 1              | 1                            |
| Lack of efficacy                      | -                               | 1              | -                            |
| Protocol deviation                    | -                               | 1              | -                            |
| Non compliance                        | -                               | -              | 1                            |

## Baseline characteristics

### Reporting groups

|                                |                                 |
|--------------------------------|---------------------------------|
| Reporting group title          | Vortioxetine 10-20 mg + placebo |
| Reporting group description: - |                                 |
| Reporting group title          | SSRI + placebo                  |
| Reporting group description: - |                                 |
| Reporting group title          | Vortioxetine 10-20 mg + SSRI    |
| Reporting group description: - |                                 |

| Reporting group values                             | Vortioxetine 10-20 mg + placebo | SSRI + placebo | Vortioxetine 10-20 mg + SSRI |
|--|---------------------------------|----------------|------------------------------|
| Number of subjects                                 | 50                              | 49             | 52                           |
| Age categorical<br>Units: Subjects                 |                                 |                |                              |
| In utero   | 0                               | 0              | 0                            |
| Preterm newborn infants (gestational age < 37 wks) | 0                               | 0              | 0                            |
| Newborns (0-27 days)                               | 0                               | 0              | 0                            |
| Infants and toddlers (28 days-23 months)           | 0                               | 0              | 0                            |
| Children (2-11 years)                              | 0                               | 0              | 0                            |
| Adolescents (12-17 years)                          | 0                               | 0              | 0                            |
| Adults (18-64 years)                               | 49                              | 49             | 52                           |
| From 65-84 years                                   | 1                               | 0              | 0                            |
| 85 years and over                                  | 0                               | 0              | 0                            |
| Age continuous<br>Units: years                     |                                 |                |                              |
| arithmetic mean                                    | 50.6                            | 47.9           | 45.9                         |
| standard deviation                                 | ± 10                            | ± 11.5         | ± 12.7                       |
| Gender categorical<br>Units: Subjects              |                                 |                |                              |
| Female   | 34                              | 34             | 41                           |
| Male   | 16                              | 15             | 11                           |
| Race<br>Units: Subjects                            |                                 |                |                              |
| White  | 50                              | 49             | 52                           |

| Reporting group values                             | Total |  |  |
|--|-------|--|--|
| Number of subjects                                 | 151   |  |  |
| Age categorical<br>Units: Subjects                 |       |  |  |
| In utero   | 0     |  |  |
| Preterm newborn infants (gestational age < 37 wks) | 0     |  |  |
| Newborns (0-27 days)                               | 0     |  |  |
| Infants and toddlers (28 days-23 months)           | 0     |  |  |
| Children (2-11 years)                              | 0     |  |  |
| Adolescents (12-17 years)                          | 0     |  |  |
| Adults (18-64 years)                               | 150   |  |  |

|                    |     |  |  |
|--------------------|-----|--|--|
| From 65-84 years   | 1   |  |  |
| 85 years and over  | 0   |  |  |
|                    |     |  |  |
| Age continuous     |     |  |  |
| Units: years       |     |  |  |
| arithmetic mean    |     |  |  |
| standard deviation | -   |  |  |
| Gender categorical |     |  |  |
| Units: Subjects    |     |  |  |
| Female             | 109 |  |  |
| Male               | 42  |  |  |
| Race               |     |  |  |
| Units: Subjects    |     |  |  |
| White              | 151 |  |  |



## End points

### End points reporting groups

|                                |                                 |
|--------------------------------|---------------------------------|
| Reporting group title          | Vortioxetine 10-20 mg + placebo |
| Reporting group description: - |                                 |
| Reporting group title          | SSRI + placebo                  |
| Reporting group description: - |                                 |
| Reporting group title          | Vortioxetine 10-20 mg + SSRI    |
| Reporting group description: - |                                 |

### Primary: Change from baseline to Week 8 in Digit Symbol Substitution Test (DSST)

|                        |  |
|------------------------|--|
| End point title        | Change from baseline to Week 8 in Digit Symbol Substitution Test (DSST)  |
| End point description: | <p>Digit Symbol Substitution Test (DSST) is a cognitive test designed to assess psychomotor speed of performance requiring visual perception, spatial decision-making, and motor skills. It consists of 133 digits and requires the patient to substitute each digit with a simple symbol in a 90-second period. Each correct symbol is counted, and the total score ranges from 0 (less than normal functioning) to 133 (greater than normal functioning)</p> |
| End point type         | Primary  |
| End point timeframe:   |  |
| Baseline to Week 8     |  |

| End point values                    | Vortioxetine 10-20 mg + placebo | SSRI + placebo     | Vortioxetine 10-20 mg + SSRI |  |
|-------------------------------------|---------------------------------|--------------------|------------------------------|--|
| Subject group type                  | Reporting group                 | Reporting group    | Reporting group              |  |
| Number of subjects analysed         | 48                              | 47                 | 48                           |  |
| Units: Score                        |                                 |                    |                              |  |
| least squares mean (standard error) | 8.1 ( $\pm$ 1.16)               | 7.94 ( $\pm$ 1.15) | 7.9 ( $\pm$ 1.14)            |  |

### Statistical analyses

|   |   |
|---|---|
| Statistical analysis title              | Vortioxetine + SSRI vs SSRI + placebo         |
| Comparison groups                       | SSRI + placebo v Vortioxetine 10-20 mg + SSRI |
| Number of subjects included in analysis | 95  |
| Analysis specification                  | Pre-specified                                 |
| Analysis type                           | superiority                                   |
| P-value                                 | = 0.9769                                      |
| Method                                  | Mixed models analysis                         |
| Parameter estimate                      | Mean difference (final values)                |
| Point estimate                          | -0.05   |

|                     |         |
|---------------------|---------|
| Confidence interval |         |
| level               | 95 %    |
| sides               | 2-sided |
| lower limit         | -3.17   |
| upper limit         | 3.08    |

|   |  |
|---|--|
| <b>Statistical analysis title</b>       | Vortioxetine + placebo vs SSRI + placebo         |
| Comparison groups                       | SSRI + placebo v Vortioxetine 10-20 mg + placebo |
| Number of subjects included in analysis | 95   |
| Analysis specification                  | Pre-specified                                    |
| Analysis type                           | superiority                                      |
| P-value                                 | = 0.9191   |
| Method                                  | Mixed models analysis                            |
| Parameter estimate                      | Mean difference (final values)                   |
| Confidence interval                     |  |
| level                                   | 95 %   |
| sides                                   | 2-sided  |
| lower limit                             | -2.98  |
| upper limit                             | 3.3  |

|   |  |
|---|--|
| <b>Statistical analysis title</b>       | Vortioxetine + placebo vs vortioxetine + SSRI                  |
| Comparison groups                       | Vortioxetine 10-20 mg + placebo v Vortioxetine 10-20 mg + SSRI |
| Number of subjects included in analysis | 96   |
| Analysis specification                  | Pre-specified  |
| Analysis type                           | superiority  |
| P-value                                 | = 0.8954   |
| Method                                  | Mixed models analysis  |
| Parameter estimate                      | Mean difference (final values)                                 |
| Confidence interval                     |  |
| level                                   | 95 %   |
| sides                                   | 2-sided  |
| lower limit                             | -2.91  |
| upper limit                             | 3.32   |

## **Secondary: Change from baseline to Week 8 in University of San Diego Performance-based Skills Assessment – Brief (UPSA-B) total score**

|                 |  |
|-----------------|--|
| End point title | Change from baseline to Week 8 in University of San Diego Performance-based Skills Assessment – Brief (UPSA-B) total score |
|-----------------|--|

### **End point description:**

The UPSA-B is a role-play based performance test designed to assess functional skills in patients with mental illness. The UPSA-B consists of two subscales: managing finances (for example, counting correct change, writing a check to pay a bill) and communication with others (for example, dialling an emergency telephone number, rescheduling a medical appointment). Raw scores of the two subscales are converted to scaled scores from 0 to 100, where higher scores indicate better functional capacity.

|                      |           |
|----------------------|-----------|
| End point type       | Secondary |
| End point timeframe: |           |
| Baseline to Week 8   |           |

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo     | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|--------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group    | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47                 | 48                                 |  |
| Units: Score                        |                                       |                    |                                    |  |
| least squares mean (standard error) | 5.99 ( $\pm$ 1.06)                    | 4.28 ( $\pm$ 1.02) | 5.24 ( $\pm$ 1.03)                 |  |

### Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Rey Auditory Visual Learning Test (RAVLT) scores: Acquisition

|                 |   |
|-----------------|---|
| End point title | Change from baseline to Week 8 in Rey Auditory Visual Learning Test (RAVLT) scores: Acquisition |
|-----------------|---|

End point description:

Rey Auditory Verbal Learning Task (RAVLT) is a cognitive test designed to assess verbal learning and memory, including immediate memory, efficiency of learning, retroactive and encoding versus retrieval. The RAVLT consists of a number of tasks where the RAVLT acquisition (learning) is the total number of correctly recalled words from three lists of words with a possible score between 0 and 45. The higher score the better performance

|                      |           |
|----------------------|-----------|
| End point type       | Secondary |
| End point timeframe: |           |
| Baseline to week 8   |           |

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo     | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|--------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group    | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47                 | 48                                 |  |
| Units: Score                        |                                       |                    |                                    |  |
| least squares mean (standard error) | 4.29 ( $\pm$ 0.66)                    | 3.45 ( $\pm$ 0.66) | 2.75 ( $\pm$ 0.66)                 |  |

### Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Rey Auditory Visual Learning Test

**(RAVLT) scores: Delayed call**

|                 |  |
|-----------------|--|
| End point title | Change from baseline to Week 8 in Rey Auditory Visual Learning Test (RAVLT) scores: Delayed call |
|-----------------|--|

End point description:

Rey Auditory Verbal Learning Task (RAVLT) is a cognitive test designed to assess verbal learning and memory, including immediate memory, efficiency of learning, retroactive and encoding versus retrieval. The RAVLT consists of a number of tasks where RAVLT delayed recall (memory) is the number of correctly recalled words at the end of the test battery from one list of words with a possible score between 0 and 15. The higher score the better performance.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8.

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo     | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|--------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group    | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47                 | 48                                 |  |
| Units: Score                        |                                       |                    |                                    |  |
| least squares mean (standard error) | 1.43 ( $\pm$ 0.37)                    | 1.46 ( $\pm$ 0.36) | 0.82 ( $\pm$ 0.36)                 |  |

**Statistical analyses**

No statistical analyses for this end point

**Secondary: Change from baseline to Week 8 in Trail Making Test A (TMT-A) score**

|                 |   |
|-----------------|---|
| End point title | Change from baseline to Week 8 in Trail Making Test A (TMT-A) score |
|-----------------|---|

End point description:

Trail Making Test (TMT) is a cognitive test designed to assess scanning, visuomotor tracking, executive function, and cognitive flexibility. It consists of two parts, A and B. Part A assesses cognitive processing speed. The lower the score the faster the processing speed.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo     | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|--------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group    | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47                 | 48                                 |  |
| Units: Score                        |                                       |                    |                                    |  |
| least squares mean (standard error) | -5.4 ( $\pm$ 1.42)                    | -1.86 ( $\pm$ 1.4) | -3.55 ( $\pm$ 1.39)                |  |

## Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Trail Making Test B (TMT-B) score

|                 |   |
|-----------------|---|
| End point title | Change from baseline to Week 8 in Trail Making Test B (TMT-B) score |
|-----------------|---|

End point description:

TMT is a cognitive test designed to assess scanning, visuomotor tracking, executive function, and cognitive flexibility. It consists of two parts, A and B. Part B examines executive functioning and ability to shift cognitive set. The lower the score the faster the ability to shift cognitive set.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to Week 8.

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo      | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|---------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group     | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47                  | 48                                 |  |
| Units: Score                        |                                       |                     |                                    |  |
| least squares mean (standard error) | -12.33 ( $\pm$<br>2.54)               | -9.55 ( $\pm$ 2.52) | -10.91 ( $\pm$ 2.5)                |  |

## Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Simple Reaction Time (SRT)

|                 |  |
|-----------------|--|
| End point title | Change from baseline to Week 8 in Simple Reaction Time (SRT) |
|-----------------|--|

End point description:

Simple Reaction Time (SRT) is designed to assess psychomotor speed. The patient presses a "yes" button, whenever an onscreen playing card is turned over. The lower score the better performance.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo          | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|-------------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group         | Reporting group                    |  |
| Number of subjects analysed         | 47                                    | 47                      | 46                                 |  |
| Units: Score                        |                                       |                         |                                    |  |
| least squares mean (standard error) | -0.031 ( $\pm$<br>0.013)              | -0.01 ( $\pm$<br>0.013) | -0.019 ( $\pm$<br>0.013)           |  |

## Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Choice Reaction Time (CRT)

|                 |  |
|-----------------|--|
| End point title | Change from baseline to Week 8 in Choice Reaction Time (CRT) |
|-----------------|--|

End point description:

Choice Reaction Time (CRT) is designed to assess visual attention. The patient presses a "yes" button whenever an onscreen playing card is turned over and is red, or a "no" button if the card is not red. The lower score the better performance.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo           | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|--------------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group          | Reporting group                    |  |
| Number of subjects analysed         | 47                                    | 47                       | 46                                 |  |
| Units: Score                        |                                       |                          |                                    |  |
| least squares mean (standard error) | -0.016 ( $\pm$<br>0.011)              | -0.014 ( $\pm$<br>0.011) | -0.01 ( $\pm$<br>0.011)            |  |

## Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Stroop Colour Naming Test (STROOP) score: Congruent

|                 |   |
|-----------------|---|
| End point title | Change from baseline to Week 8 in Stroop Colour Naming Test (STROOP) score: Congruent |
|-----------------|---|

End point description:

Stroop Colour Naming Test (STROOP) is a cognitive test designed to assess the ability to inhibit a prepotent response to reading words while performing a task that requires attention control. The STROOP comprises two sheets with 50 words on each, and each word is the name of a colour. In the Congruent STROOP Sheet, the word and ink colour match. The lower the score the faster the processing speed.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo  | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|-----------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47              | 48                                 |  |
| Units: Score                        |                                       |                 |                                    |  |
| least squares mean (standard error) | -6.58 (± 1.24)                        | -4.52 (± 1.22)  | -7.04 (± 1.22)                     |  |

### Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Stroop Colour Naming Test (STROOP) score : Incongruent

|                 |  |
|-----------------|--|
| End point title | Change from baseline to Week 8 in Stroop Colour Naming Test (STROOP) score : Incongruent |
|-----------------|--|

End point description:

Stroop Colour Naming Test (STROOP) is a cognitive test designed to assess the ability to inhibit a prepotent response to reading words while performing a task that requires attention control. The STROOP comprises two sheets with 50 words on each, and each word is the name of a colour. In the Incongruent STROOP Sheet, the word and ink colour do not match. The lower the score the greater the cognitive flexibility.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8.

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo  | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|-----------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47              | 48                                 |  |
| Units: Score                        |                                       |                 |                                    |  |
| least squares mean (standard error) | -8.86 (± 1.83)                        | -8.69 (± 1.81)  | -9.13 (± 1.8)                      |  |

### Statistical analyses

No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Perceived Deficits Questionnaire –Depression (PDQ-D) total score

|                 |  |
|-----------------|--|
| End point title | Change from baseline to Week 8 in Perceived Deficits Questionnaire –Depression (PDQ-D) total score |
|-----------------|--|

**End point description:**

Patient-reported cognitive function outcome including attention concentration, retrospective memory, prospective memory, and, planning organization. The total score of the 20 items ranges from 0 to 80 with higher scores reflecting greater subjective cognitive dysfunction as perceived by the patient.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8.

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo          | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|-------------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group         | Reporting group                    |  |
| Number of subjects analysed         | 48                                    | 47                      | 48                                 |  |
| Units: Score                        |                                       |                         |                                    |  |
| least squares mean (standard error) | -15.71 ( $\pm$<br>1.63)               | -13.11 ( $\pm$<br>1.62) | -15.58 ( $\pm$<br>1.61)            |  |

**Statistical analyses**

No statistical analyses for this end point

**Secondary: Change from baseline to Week 8 in Hamilton Depression Rating Scale 17 items (HAM-D17) total score**

|                 |   |
|-----------------|---|
| End point title | Change from baseline to Week 8 in Hamilton Depression Rating Scale 17 items (HAM-D17) total score |
|-----------------|---|

**End point description:**

The Hamilton Depression Rating Scale (HAM-D17) is a 17-item rating scale designed to measure the severity of depressive symptoms in patients with primary depressive illness. It includes psychological and somatic depressive symptoms. The rating is based on specific statements, content of the answers, tone, facial expression and gestures of the patient during a clinical interview. Total score from 0-52. The higher the score, the more severe.

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8.

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo      | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|---------------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group     | Reporting group                    |  |
| Number of subjects analysed         | 47                                    | 44                  | 47                                 |  |
| Units: Score                        |                                       |                     |                                    |  |
| least squares mean (standard error) | -1.18 ( $\pm$ 0.48)                   | -0.97 ( $\pm$ 0.48) | -1.8 ( $\pm$ 0.47)                 |  |

**Statistical analyses**



No statistical analyses for this end point

### Secondary: Change from baseline to Week 8 in Clinical Global Impression – Severity of Illness (CGI-S) score

|                 |  |
|-----------------|--|
| End point title | Change from baseline to Week 8 in Clinical Global Impression – Severity of Illness (CGI-S) score |
|-----------------|--|

End point description:

The Clinical Global Impression - Severity of Illness (CGI-S) is a 7-point scale rated from 1 (normal, not at all ill) to 7 (among the most extremely ill patients).

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline to week 8.

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo  | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|-----------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group | Reporting group                    |  |
| Number of subjects analysed         | 47                                    | 44              | 47                                 |  |
| Units: Score                        |                                       |                 |                                    |  |
| least squares mean (standard error) | -0.22 (± 0.1)                         | -0.13 (± 0.1)   | -0.25 (± 0.1)                      |  |

### Statistical analyses

No statistical analyses for this end point

### Secondary: Clinical Global Impression – Global Improvement (CGI-I) score at Week 8

|                 |   |
|-----------------|---|
| End point title | Clinical Global Impression – Global Improvement (CGI-I) score at Week 8 |
|-----------------|---|

End point description:

The Clinical Global Impression - Global Improvement (CGI-I) is a 7-point scale rated from 1 (very much improved) to 7 (very much worse).

|                |           |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Week 8

| End point values                    | Vortioxetine<br>10-20 mg +<br>placebo | SSRI + placebo  | Vortioxetine<br>10-20 mg +<br>SSRI |  |
|-------------------------------------|---------------------------------------|-----------------|------------------------------------|--|
| Subject group type                  | Reporting group                       | Reporting group | Reporting group                    |  |
| Number of subjects analysed         | 47                                    | 44              | 47                                 |  |
| Units: Score                        |                                       |                 |                                    |  |
| least squares mean (standard error) | 2.98 (± 0.17)                         | 3.35 (± 0.17)   | 3.14 (± 0.17)                      |  |

## **Statistical analyses**

---

No statistical analyses for this end point

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

First dose to follow-up

|                 |            |
|-----------------|------------|
| Assessment type | Systematic |
|-----------------|------------|

### Dictionary used

|                 |        |
|-----------------|--------|
| Dictionary name | MedDRA |
|-----------------|--------|

|                    |      |
|--------------------|------|
| Dictionary version | 18.1 |
|--------------------|------|

### Reporting groups

|                       |                                 |
|-----------------------|---------------------------------|
| Reporting group title | Vortioxetine 10-20 mg + placebo |
|-----------------------|---------------------------------|

Reporting group description:

Vortioxetine 10-20 mg + placebo

|                       |                |
|-----------------------|----------------|
| Reporting group title | SSRI + placebo |
|-----------------------|----------------|

Reporting group description:

SSRI + placebo

|                       |                              |
|-----------------------|------------------------------|
| Reporting group title | Vortioxetine 10-20 mg + SSRI |
|-----------------------|------------------------------|

Reporting group description:

Vortioxetine10-20 mg + SSRI

| Serious adverse events                            | Vortioxetine 10-20 mg + placebo | SSRI + placebo | Vortioxetine 10-20 mg + SSRI |
|---|---------------------------------|----------------|------------------------------|
| Total subjects affected by serious adverse events |                                 |                |                              |
| subjects affected / exposed                       | 0 / 50 (0.00%)                  | 0 / 49 (0.00%) | 0 / 52 (0.00%)               |
| number of deaths (all causes)                     | 0                               | 0              | 0                            |
| number of deaths resulting from adverse events    | 0                               | 0              | 0                            |

Frequency threshold for reporting non-serious adverse events: 5 %

| Non-serious adverse events                            | Vortioxetine 10-20 mg + placebo | SSRI + placebo   | Vortioxetine 10-20 mg + SSRI |
|---|---------------------------------|------------------|------------------------------|
| Total subjects affected by non-serious adverse events |                                 |                  |                              |
| subjects affected / exposed                           | 24 / 50 (48.00%)                | 11 / 49 (22.45%) | 29 / 52 (55.77%)             |
| Nervous system disorders                              |                                 |                  |                              |
| Dizziness   |                                 |                  |                              |
| subjects affected / exposed                           | 6 / 50 (12.00%)                 | 0 / 49 (0.00%)   | 2 / 52 (3.85%)               |
| occurrences (all)                                     | 7                               | 0                | 2                            |
| Headache  |                                 |                  |                              |
| subjects affected / exposed                           | 3 / 50 (6.00%)                  | 5 / 49 (10.20%)  | 9 / 52 (17.31%)              |
| occurrences (all)                                     | 3                               | 5                | 10                           |
| General disorders and administration                  |                                 |                  |                              |

|   |                  |                |                  |
|---|------------------|----------------|------------------|
| site conditions                         |                  |                |                  |
| Fatigue                                 |                  |                |                  |
| subjects affected / exposed             | 1 / 50 (2.00%)   | 1 / 49 (2.04%) | 3 / 52 (5.77%)   |
| occurrences (all)                       | 1                | 1              | 3                |
| Gastrointestinal disorders              |                  |                |                  |
| Diarrhoea                               |                  |                |                  |
| subjects affected / exposed             | 4 / 50 (8.00%)   | 0 / 49 (0.00%) | 4 / 52 (7.69%)   |
| occurrences (all)                       | 6                | 0              | 4                |
| Nausea                                  |                  |                |                  |
| subjects affected / exposed             | 11 / 50 (22.00%) | 1 / 49 (2.04%) | 16 / 52 (30.77%) |
| occurrences (all)                       | 12               | 1              | 16               |
| Skin and subcutaneous tissue disorders  |                  |                |                  |
| Hyperhidrosis                           |                  |                |                  |
| subjects affected / exposed             | 3 / 50 (6.00%)   | 0 / 49 (0.00%) | 1 / 52 (1.92%)   |
| occurrences (all)                       | 3                | 0              | 1                |
| Psychiatric disorders                   |                  |                |                  |
| Insomnia                                |                  |                |                  |
| subjects affected / exposed             | 2 / 50 (4.00%)   | 0 / 49 (0.00%) | 3 / 52 (5.77%)   |
| occurrences (all)                       | 2                | 0              | 3                |
| Restlessness                            |                  |                |                  |
| subjects affected / exposed             | 0 / 50 (0.00%)   | 0 / 49 (0.00%) | 3 / 52 (5.77%)   |
| occurrences (all)                       | 0                | 0              | 3                |
| Infections and infestations             |                  |                |                  |
| Nasopharyngitis                         |                  |                |                  |
| subjects affected / exposed             | 3 / 50 (6.00%)   | 4 / 49 (8.16%) | 3 / 52 (5.77%)   |
| occurrences (all)                       | 3                | 4              | 3                |
| Viral upper respiratory tract infection |                  |                |                  |
| subjects affected / exposed             | 3 / 50 (6.00%)   | 3 / 49 (6.12%) | 1 / 52 (1.92%)   |
| occurrences (all)                       | 3                | 3              | 1                |

## **More information**

### **Substantial protocol amendments (globally)**

Were there any global substantial amendments to the protocol? No

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### **Interruptions (globally)**

Were there any global interruptions to the trial? No

### **Limitations and caveats**

None reported