Data Supplement for Leonpacher et al., Effects of Citalopram on Neuropsychiatric Symptoms in Alzheimer's Dementia: Evidence From the CitAD Study. Am J Psychiatry (doi: 10.1176/appi.ajp.2016.15020248)

**TABLE S1.** Neuropsychiatric Inventory (NPI) Scores at Week 9<sup>^</sup>

1 2		All Participants*			
	Citalopram (n=86)	Placebo (n=83)	OR (95% CI) <sup>1</sup>	P-value	
Individual NPI Domain	n, %	n, %			
Delusions	22 (26)	35 (42)	0.45 (0.22-0.95)	0.04	
Hallucinations	11 (13)	13 (16)	1.09 (0.42-2.81)	0.87	
Agitation/Aggression <sup>1</sup>	66 (77)	70 (84)	0.63 (0.28-1.40)	0.26	
Depression / Dysphoria	24 (28)	30 (36)	0.67 (0.35-1.30)	0.24	
Anxiety	36 (42)	54 (65)	0.44 (0.23-0.84)	0.01	
Elation / Euphoria	3 (3)	5 (6)	0.46 (0.11-1.91)	0.28	
Apathy / Indifference	41 (48)	42 (51)	0.93 (0.49-1.78)	0.83	
Disinhibition	27 (31)	34 (41)	0.72 (0.37-1.42)	0.34	
Irritability / Lability	49 (57)	61 (73)	0.41 (0.21-0.8)	0.01	
Aberrant Motor Behavior	34 (40)	47 (57)	0.41 (0.21-0.8)	0.01	
Sleep / Nighttime Behavior	21 (24)	30 (36)	0.62 (0.31-1.23)	0.17	
Appetite / Eating Disorders	22 (26)	18 (22)	1.23 (0.62-2.43)	0.56	

<sup>^</sup>All missing data for all study visits were imputed using the method of multiple imputation, \*Number (%) with domain or summary score >0 at week 9. Including all randomized participants with week 9 data (86 in citalopram and 83 in placebo); 1. The odds ratio is calculated using GEE including all follow-up visits with a logistic link and first order autoregressive covariance structure. The estimate shown is for the odds of reporting the symptoms at week 9 for citalopram vs. placebo controlling for baseline symptom score and MMSE. A number less than one favors citalopram; CI = confidence interval; NPI = neuropsychiatric inventory

## FIGURE S1. Participant flow, CONSORT diagram

Randomized N = 186Citalopram Placebo Assigned to citalopram (n = 94)Assigned to placebo (n = 92)Received 9 weeks of citalogram (n = 72)Received 9 weeks of placebo (n = 73)Did not receive any citalogram (n = 0)Did not receive any placebo (n = 0)Did not receive 9 weeks of citalogram  $(n = 22)^*$ Did not receive 9 weeks of placebo  $(n = 19)^*$ Primary reason for discontinuation: Primary reason for discontinuation: Medication conflict (n = 2)Medication conflict (n = 0)Adverse events / side effects (n = 13)Adverse events / side effects (n = 13)Refused to take study drug (n = 1)Refuse to take study drug (n = 3)Did not come to study visit(s) (n = 6) Did not come to study visit(s) (n = 3) Completed week 9 visit (n = 86)Completed week 9 visit (n = 83)Did not complete week 9 visit (n = 9)Did not complete week 9 visit (n = 8)Refusal to continue (n = 3)Refusal to continue (n = 5)Family pressure to discontinue (n = 2)Family pressure to discontinue (n = 2)Did not return for week 9 follow-up visit(s) (n = 1)Did not return for week 9 follow-up visit(s) (n = 3)Died (n = 0)Died (n = 1)Included in primary analysis<sup>†</sup> Included in primary analysis<sup>†</sup> NBRS analysis NBRS analysis Shown in table 2 (n = 90)Shown in table 2 (n = 85)Slope model  $(n = 94)^{\dagger\dagger}$ Slope model  $(n = 92)^{\dagger\dagger}$ ADCS-CGIC analysis ADCS-CGIC analysis Shown in table 2 (n = 86)Shown in table  $2 (n = 81)^{**}$ 

Sensitivity analysis  $(n = 94)^{\dagger\dagger}$ 

Sensitivity analysis  $(n = 92)^{\dagger\dagger}$ 

<sup>\*</sup>Available data from participants were included in the analysis in the originally assigned treatment group regardless of treatment adherence.

The primary outcomes were the comparisons of 1) difference in week 9 scores between citalopram and placebo on the Neurobehavioral Rating Scale – agitation subscore calculated using mixed effects regression and 2) ratings on the ADCS – Clinical Global Impression of Change – agitation subscore at week 9 calculated using proportional odds regression.

<sup>\*\*</sup> Two participants in placebo group had week 9 visit, but the ADCS-CGIC was not administered.

<sup>††</sup> NBRS slope model included data from all randomized participants. For the ADCS-CGIC sensitivity analyses outcomes were multiply imputed.