Cholinergic Modulation of Disorder-Relevant Neural Circuits in Generalized Anxiety Disorder

Supplemental Information

Table S1. Activation elicited by viewing fearful faces in the placebo condition ($p < .05$ FDR corrected). There were no clusters that showed significant deactivation in the fearful face condition relative to baseline.

Region	Brodmann areas	Cluster extent (voxels)	*T*	*p*	MNI coordinates
Cerebellum, lingual gyrus, superior occipital gyrus, middle occipital gyrus, calcarine sulcus	18, 19	7730	10.56	< .001	12, -55, -19
Precentral gyrus	6	118	6.63	< .001	45, -7, 53
Inferior frontal gyrus	44	166	6.41	< .001	42, 17, 20
Inferior frontal gyrus	44	44	6.13	0.007	-33, 14, 23
Middle frontal gyrus	46	91	5.87	< .001	-27, 41, 26
Superior frontal gyrus	46	73	5.8	0.001	24, 44, 14
Postcentral gyrus, angular gyrus	40, 7	201	5.61	< . 001	27, -37, 44
Supramarginal gyrus	42	45	4.89	0.007	60, -40, 26

Table S2. Comparisons between drug conditions for all emotions. F-tests represent the overall main effect of drug in an ANOVA, while t-tests represent the comparison between each drug and placebo. Degrees of freedom differ across drug conditions due to differing numbers of excluded subjects based on motion. Positive *t* values represent a reduction in activity relative to placebo.

Emotion	Hemisphere	F-test	Lorazepam	BNC210 low dose	BNC210 high dose
Fear	Left	$F(3, 69) = 1.53$ p = 0.38	$t(19) = 1.78$ p = 0.088	**$t(19) = 2.78$** **p = 0.011**	$t(19) = 0.2$ p = 0.61
	Right	$F(3, 69) = 2.56$ p = 0.12	**$t(19) = 2.12$** **p = 0.047**	**$t(19) = 3.07$** **p = 0.006**	$t(19) = 0.07$ p = 0.69
Happy	Left	$F(3, 73) = 0.62$ p = 0.85	$t(18) = 1.82$ p = 0.08	$t(18) = 0.97$ p = 0.31	$t(18) = 0.97$ p = 0.31
	Right	$F(3, 73) = 0.19$ p = 0.99	$t(18) = 0.80$ p = 0.39	$t(18) = 1.30$ p = 0.20	$t(18) = 0.46$ p = 0.54
Sad	Left	$F(3, 61) = 2.01$ p = 0.22	**$t(15) = 2.74$** **p = 0.015**	$t(15) = 1.03$ p = 0.30	$t(15) = -0.98$ p = 0.97
	Right	$F(3, 61) = 0.81$ p = 0.74	$t(15) = 1.64$ p = 0.12	$t(15) = 0.58$ p = 0.49	$t(15) = -0.31$ p = 0.85