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Serotonin transporter gene: a new polymorphism may affect response to antidepressant treatments in major depression

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(Article begins on next page)

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Table 1. Clinical characteristics outcomes at week 8 according to treatment group. Chi-squared and Fisher's exact tests were used as appropriate to test differences between the two treatment groups.

	Whole sample (N=137)	IPC (N=40)	Antidepressants (N=97)	Statistics
Response				
Yes	88(64.23%)	25(62.50%)	63(64.95%)	X ² =0.006, df=1, p=0.94
No	49(35.77%)	15(37.50%)	34(35.05%)	
Remission				
Yes	87(63.50%)	28(70.00%)	59(60.82%)	X ² =0.671, df=1, p=0.41
No	50(36.50%)	12(30.00%)	38(39.18%)	
Improvement (%)	54.66 ± 28.77	52.09 ± 19.86	55.72 ± 31.76	t = -0.67, CI = -0.144 - 0.071, p = 0.50
HDRS missing at week 8	20	1	19	OR = 0.13, CI = 0.003-0.865, p = 0.03
Baseline severity(HDRS)	17.97 ± 5.24	16.24 ± 4.01	18.58 ± 5.50	t = -2.49, CI = -4.18 - -0.48, p = 0.014
Age(mean ± SD)	51.02 ± 17.98	44.10 ± 16.19	53.51 ± 18.00	t = -2.95, CI = -15.72 - -3.10, p = 0.004
Gender (F/M)	91/46	24/16	67/30	X ² =1.05, df=1, p=0.31
Pharmacological treatment (%)	-	None	78 (80.4): SSRIs 15(15.5): SNRIs 4 (4.1): other antidepressants	-

CI=95% confidence interval, IPC= Inter-personal Counseling, OR=odds ratio, HDRS=Hamilton Depression Rating Scale
SSRIs=Selective Serotonin Reuptake Inhibitors, SNRIs=Serotonin Norepinephrine Reuptake Inhibitors

Table 2. Response and remission rates at week 8 for each genotype and treatment group

IPC (N=39)				Antidepressants (N=95)					Whole sample (N=134)				
HTR2A rs6314	CC	CT	TT	Statistics	CC	CT	TT	Statistics	CC	CT	TT	Statistics	
Response	20(83.33)	4(16.67)	0(0)	$X^2=0.566, df=1$ p=0.45	48(77.42)	13(20.97)	1(1.61)	$X^2=0.669, df=2$ p=0.72	68(79.07)	17(19.77)	1(1.16)	$X^2=0.576, df=2$ p=0.75	
Yes	11(73.33)	4(26.67)	0(0)		27(81.82)	6(18.18)	0(0)		38(79.17)	10(20.83)	0(0)		
Remission	22(81.48)	5(15.52)	0(0)	$X^2=0.214, df=1$ p=0.64	44(75.86)	14(24.14)	0(0)	$X^2=3.022, df=2$ p=0.22	66(77.65)	19(22.35)	0(0)	$X^2=2.357, df=2$ p=0.31	
Yes	9(75.00)	3(25.00)	0(0)		31(83.78)	5(13.51)	1(2.70)		40(81.63)	8(16.33)	1(2.04)		
BDNF rs6265					AA	AG	GG		AA	AG	GG		
Response	3(12.50)	10(41.67)	11(45.83)	$X^2=2.584, df=2$ p=0.28	3(4.84)	24(38.71)	35(56.45)	$X^2=0.175, df=2$ p=0.92	6(6.98)	34(39.53)	46(53.49)	$X^2=1.716, df=2$ p=0.42	
Yes	0(0)	9(60.00)	6(40.00)		1(3.03)	13(39.39)	19(57.58)		1(2.08)	22(45.83)	25(52.08)		
Remission	3(11.11)	11(40.74)	13(48.15)	$X^2=2.898, df=2$ p=0.24	3(5.17)	23(39.66)	32(55.17)	$X^2=0.419, df=2$ p=0.81	6(7.06)	34(40.00)	45(52.94)	$X^2=1.677, df=2$ p=0.43	
Yes	0(0)	8(66.67)	4(33.33)		1(2.70)	14(37.84)	22(59.46)		1(2.04)	22(44.90)	26(53.06)		
SLC6A4 rs8076005					AA	AG	GG		AA	AG	GG		
Response	20(83.33)	4(16.67)	0(0)	$X^2=0.079, df=1$ p=0.78	38(61.29)	21(33.87)	3(4.84)	$X^2=8.405, df=2$ p=0.015	58(67.44)	25(29.07)	3(3.49)	$X^2=7.168, df=2$ p=0.03	
Yes	13(86.67)	2(13.33)	0(0)		14(42.42)	11(33.33)	8(24.24)		27(56.25)	13(27.08)	8(16.67)		
Remission	23(85.19)	4(14.81)	0(0)	$X^2=0.022, df=1$ p=0.88	32(55.17)	22(37.93)	4(6.90)	$X^2=3.622, df=2$ p=0.16	55(64.71)	26(30.59)	4(4.71)	$X^2=3.942, df=2$ p=0.14	
Yes	10(83.33)	2(16.67)	0(0)		20(54.05)	10(27.03)	7(18.92)		30(61.22)	12(24.49)	7(14.29)		
CREB1 rs2253206					AA	AG	GG		AA	AG	GG		
Response	5(20.83)	14(58.33)	5(20.83)	$X^2=4.398, df=2$ p=0.11	10(16.13)	34(54.84)	18(29.03)	$X^2=0.545, df=2$ p=0.76	15(17.44)	48(55.81)	23(26.74)	$X^2=3.162, df=2$ p=0.21	
Yes	2(13.33)	5(33.33)	8(53.33)		5(15.15)	16(48.48)	12(36.36)		7(14.58)	21(43.75)	20(41.67)		
Remission	5(18.52)	13(48.15)	9(33.33)	$X^2=0.022, df=2$ p=0.99	8(13.79)	33(56.90)	17(29.31)	$X^2=1.133, df=2$ p=0.57	13(15.29)	46(54.12)	26(30.59)	$X^2=0.653, df=2$ P=0.72	
Yes	2(16.67)	6(50.00)	4(33.33)		7(18.92)	17(49.95)	13(35.14)		9(18.37)	23(46.94)	17(34.69)		
TPH2 rs11179023					AA	AG	GG		AA	AG	GG		
Response	1(4.17)	5(20.83)	18(75.00)	$X^2=2.207, df=2$ p=0.33	3(4.84)	17(27.42)	42(67.74)	$X^2=3.449, df=2$ p=0.18	4(4.66)	22(25.58)	60(69.77)	$X^2=0.911, df=2$ p=0.63	
Yes	0(0)	1(6.67)	14(93.33)		2(6.06)	15(45.45)	16(48.48)		2(4.17)	16(33.33)	30(62.50)		
Remission	1(3.70)	4(14.81)	22(81.48)	$X^2=0.466, df=2$ p=0.79	3(5.17)	19(32.76)	36(62.07)	$X^2=0.065, df=2$ p=0.97	4(4.71)	23(27.06)	58(68.24)	$X^2=0.205, df=2$ p=0.90	
Yes	0(0)	2(16.67)	10(83.33)		2(5.41)	13(35.14)	22(59.46)		2(4.08)	15(30.61)	32(65.31)		

Table 3. Response and remission rates at week 8 for each allele and treatment group

IPC (N=39)				Antidepressants (N=95)			Whole sample (N=134)		
HTR2A rs6314	C	T	Statistics	C	T	Statistics	C	T	Statistics
Response									
Yes	44 (91.67)	4(8.33)	$X^2=0.501,df=1$ p=0.48	109(87.90)	15(12.10)	$X^2=0.396,df=1$ p=0.53	153(88.95)	19(11.05)	$X^2=0.025,df=1$ p=0.87
No	26(86.67)	4(13.33)		60(90.91)	6(0.09)		86(89.58)	10(10.42)	
Remission									
Yes	49(90.74)	5(9.26)	$X^2=0.190,df=1$ p=0.66	102(87.93)	14(12.07)	$X^2=0.313,df=1$ p=0.58	151(88.82)	19(11.18)	$X^2=0.061,df=1$ p=0.81
No	21(87.50)	3(12.50)		67(90.54)	7(9.46)		88(89.80)	10(10.20)	
<hr/>									
BDNF rs6265				A	G		A	G	
Response									
Yes	16 (33.33)	32(66.67)	$X^2=0.094,df=1$ p=0.76	30(24.19)	94(75.81)	$X^2=0.051,df=1$ p=0.82	46(26.74)	126(73.26)	$X^2=0.097,df=1$ p=0.76
No	9(30.00)	21(70.00)		15(22.73)	51(77.27)		24(25.00)	72(75.00)	
Remission									
Yes	17 (31.48)	37(68.52)	$X^2=0.026,df=1$ p=0.87	29(25.00)	87(75.00)	$X^2=0.285,df=1$ p=0.59	46(27.06)	124(72.94)	$X^2=0.213,df=1$ p=0.65
No	8(33.33)	16(66.67)		16(21.62)	58(78.38)		24(24.49)	74(75.51)	
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SLC6A4 rs8076005				A	G		A	G	
Response									
Yes	44 (91.67)	4(8.33)	$X^2=0.072,df=1$ p=0.79	97(78.23)	27(21.77)	$X^2=7.752,df=1$ p=0.005	141(81.98)	31(18.02)	$X^2=5.265,df=1$ p=0.02
No	28 (93.33)	2(6.67)		39(59.09)	27(40.91)		67(69.79)	29(30.21)	
Remission									
Yes	50(92.59)	4(7.41)	$X^2=0.020,df=1$ p=0.89	86(74.14)	30(25.86)	$X^2=0.959,df=1$ p=0.33	136(80.00)	34(20.00)	$X^2=1.526,df=1$ p=0.22
No	22(91.67)	2(8.33)		50(67.57)	24(32.43)		72(73.47)	26(26.53)	
<hr/>									
CREB1 rs2253206				A	G		A	G	
Response									
Yes	24 (50.00)	24(50.00)	$X^2=3.025,df=1$ p=0.08	54(43.55)	70(56.45)	$X^2=0.305,df=1$ p=0.58	78(45.35)	94(54.65)	$X^2=1.997,df=1$ p=0.16
No	9(30.00)	21(70.00)		26(39.39)	40(60.61)		35(36.46)	61(63.54)	
Remission									
Yes	23(42.59)	31(57.41)	$X^2=0.006,df=1$ p=0.94	49(42.24)	67(57.76)	$X^2=0.002,df=1$ p=0.96	72(42.35)	98(57.65)	$X^2=0.007,df=1$ p=0.93
No	10(41.67)	14(58.33)		31(41.89)	43(58.11)		41(41.84)	57(58.16)	
<hr/>									
TPH2 rs11179023				A	G		A	G	
Response									
Yes	7 (14.58)	41(85.42)	$X^2=2.538,df=1$ p=0.11	23(18.55)	101(81.45)	$X^2=2.623,df=1$ p=0.11	30(17.44)	142(82.56)	$X^2=0.467,df=1$ p=0.49
No	1(3.33)	29(96.67)		19(28.79)	47(71.21)		20(20.83)	76(79.17)	
Remission									
Yes	6 (11.11)	48(88.89)	$X^2=0.139,df=1$ p=0.709	25(21.55)	91(78.45)	$X^2=0.053,df=1$ p=0.82	31(18.24)	139(81.76)	$X^2=0.054,df=1$ p=0.82
No	2(8.33)	22(91.67)		17(22.97)	57(77.03)		19(19.39)	79(80.61)	