

Supplementary Information (Barkus et al) Table 1- Raw data of effect of ebselen and MDL 100,907 on behavioural performance in the 5-CSRTT. Baseline and Drug were performed using inter trial intervals of 5 s and 7 s, respectively. Δ values are those used in the main paper. Mean $\pm$ SEM values, n=14. *p<0.05 vs saline.

Dose (mg/kg)	Premature (%)			Accuracy (%)			Omissions (%)		
	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ
Ebselen									
0	5.214 $\pm$ 1.056	27.330 $\pm$ 4.025	22.116 $\pm$ 3.608	90.698 $\pm$ 1.500	86.309 $\pm$ 2.169	-4.389 $\pm$ 2.078	6.106 $\pm$ 1.912	9.750 $\pm$ 2.223	3.645 $\pm$ 1.975
2	5.279 $\pm$ 1.146	21.759 $\pm$ 3.528	16.480 $\pm$ 3.452	90.044 $\pm$ 0.897	85.775 $\pm$ 2.505	-4.269 $\pm$ 2.564	13.054 $\pm$ 4.712	15.553 $\pm$ 5.547	2.450 $\pm$ 2.968
5	7.301 $\pm$ 1.869	20.321 $\pm$ 3.567	13.020 $\pm$ 2.609 *	91.123 $\pm$ 1.571	84.579 $\pm$ 2.174	-6.543 $\pm$ 1.794	6.071 $\pm$ 1.629	13.184 $\pm$ 4.123	7.113 $\pm$ 3.907
10	5.074 $\pm$ 1.121	19.591 $\pm$ 3.071	14.517 $\pm$ 2.741 *	89.778 $\pm$ 1.428	84.762 $\pm$ 1.954	-5.017 $\pm$ 2.058	8.520 $\pm$ 3.178	10.382 $\pm$ 2.452	1.863 $\pm$ 2.074
MDL 100,907									
0	4.544 $\pm$ 0.910	20.901 $\pm$ 3.269	16.356 $\pm$ 3.118	92.367 $\pm$ 0.983	85.684 $\pm$ 2.264	-6.683 $\pm$ 1.821	7.248 $\pm$ 1.401	9.741 $\pm$ 2.358	2.494 $\pm$ 1.706
0.01	5.817 $\pm$ 1.281	14.783 $\pm$ 2.055	8.966 $\pm$ 1.641 *	89.279 $\pm$ 2.116	87.644 $\pm$ 2.232	-1.636 $\pm$ 1.857 *	8.006 $\pm$ 2.068	9.230 $\pm$ 2.021	1.223 $\pm$ 1.432
0.03	7.001 $\pm$ 1.369	13.968 $\pm$ 2.184	6.967 $\pm$ 2.114 *	89.690 $\pm$ 1.433	87.140 $\pm$ 1.870	-2.550 $\pm$ 1.417	7.643 $\pm$ 1.485	9.043 $\pm$ 2.034	1.400 $\pm$ 0.964
0.1	6.908 $\pm$ 1.454	14.184 $\pm$ 3.351	7.276 $\pm$ 2.695 *	88.777 $\pm$ 1.160	87.965 $\pm$ 2.142	-0.812 $\pm$ 1.768 *	6.500 $\pm$ 2.148	7.749 $\pm$ 1.981	1.249 $\pm$ 1.025
Ebselen									
Dose (mg/kg)	Correct Latency (s)			Reward latency (s)			Trials completed		
	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ
0	0.511 $\pm$ 0.021	0.501 $\pm$ 0.020	-0.010 $\pm$ 0.025	1.800 $\pm$ 0.050	1.831 $\pm$ 0.082	0.0312 $\pm$ 0.086	97.643 $\pm$ 2.357	93.786 $\pm$ 3.883	-3.857 $\pm$ 2.341
2	0.560 $\pm$ 0.051	0.524 $\pm$ 0.018	-0.036 $\pm$ 0.048	3.084 $\pm$ 1.189	1.975 $\pm$ 0.092	-1.109 $\pm$ 1.202	95.143 $\pm$ 4.857	89.286 $\pm$ 5.522	-5.857 $\pm$ 3.676
5	0.505 $\pm$ 0.023	0.504 $\pm$ 0.018	-0.001 $\pm$ 0.020	1.810 $\pm$ 0.047	1.851 $\pm$ 0.083	0.041 $\pm$ 0.077	100 $\pm$ 0	97.929 $\pm$ 1.303	-2.071 $\pm$ 1.303
10	0.517 $\pm$ 0.026	0.510 $\pm$ 0.021	-0.007 $\pm$ 0.018	1.896 $\pm$ 0.072	1.856 $\pm$ 0.077	-0.040 $\pm$ 0.050	96.643 $\pm$ 3.357	98.857 $\pm$ 0.838	2.214 $\pm$ 3.544
MDL 100,907									
0	0.496 $\pm$ 0.025	0.497 $\pm$ 0.015	0.000 $\pm$ 0.018	1.956 $\pm$ 0.166	1.868 $\pm$ 0.077	-0.088 $\pm$ 0.187	98.786 $\pm$ 0.840	98.857 $\pm$ 1.143	0.071 $\pm$ 1.492
0.01	0.478 $\pm$ 0.019	0.526 $\pm$ 0.028	0.048 $\pm$ 0.018	1.815 $\pm$ 0.057	2.109 $\pm$ 0.183	0.295 $\pm$ 0.170	98.357 $\pm$ 1.643	98.143 $\pm$ 1.857	-0.214 $\pm$ 2.572
0.03	0.494 $\pm$ 0.019	0.532 $\pm$ 0.030	0.037 $\pm$ 0.022	1.777 $\pm$ 0.056	1.915 $\pm$ 0.068	0.138 $\pm$ 0.044	100 $\pm$ 0	99.500 $\pm$ 0.500	-0.500 $\pm$ 0.500
0.1	0.497 $\pm$ 0.031	0.528 $\pm$ 0.031	0.031 $\pm$ 0.027	1.791 $\pm$ 0.054	2.103 $\pm$ 0.096	0.312 $\pm$ 0.070	100 $\pm$ 0	98.357 $\pm$ 1.643	-1.643 $\pm$ 1.643

Supplementary Information (Barkus et al) Table 2- Raw data of effect of ebselen and MDL 100,907 on behavioural performance in the 5-CSRTT in the presence and absence of cocaine. Baseline and Drug were performed using an inter trial interval of 5 s. Δ values are those used in the main paper. V=vehicle, C=cocaine, E=ebselen, M=MDL100,907. Mean $\pm$ SEM values, n=12.

*p<0.05 vs vehicle, †p<0.05 vs cocaine

Group	Premature (%)			Accuracy (%)			Omissions (%)		
	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ
V - V	7.224 $\pm$ 1.228	7.534 $\pm$ 2.125	0.310 $\pm$ 1.170	90.754 $\pm$ 1.710	92.848 $\pm$ 1.414	2.094 $\pm$ 1.048	3.667 $\pm$ 0.987	4.083 $\pm$ 1.667	0.417 $\pm$ 1.667
V - C	6.660 $\pm$ 1.449	16.042 $\pm$ 4.555	9.382 $\pm$ 3.980 *	90.598 $\pm$ 1.699	85.313 $\pm$ 2.324	-5.285 $\pm$ 2.201 *	4.458 $\pm$ 1.124	13.963 $\pm$ 3.734	9.504 $\pm$ 3.279 *
E - V	7.777 $\pm$ 1.840	8.267 $\pm$ 2.163	0.490 $\pm$ 1.176	92.280 $\pm$ 1.018	92.583 $\pm$ 1.448	0.303 $\pm$ 1.419	3.885 $\pm$ 1.243	4.286 $\pm$ 1.384	0.401 $\pm$ 0.938
E - C	8.081 $\pm$ 1.928	8.860 $\pm$ 4.100	0.779 $\pm$ 3.488 †	90.626 $\pm$ 1.410	86.945 $\pm$ 2.409	-3.682 $\pm$ 2.374 *	3.250 $\pm$ 0.760	14.946 $\pm$ 4.089	11.696 $\pm$ 4.243 *
V - V	8.522 $\pm$ 1.360	7.659 $\pm$ 1.752	-0.864 $\pm$ 1.094	91.355 $\pm$ 1.385	90.614 $\pm$ 1.970	-0.742 $\pm$ 1.350	4.167 $\pm$ 1.021	3.417 $\pm$ 1.033	-0.750 $\pm$ 0.750
V - C	9.830 $\pm$ 2.368	23.789 $\pm$ 6.423	13.959 $\pm$ 5.614 *	87.848 $\pm$ 1.990	83.614 $\pm$ 2.878	-4.234 $\pm$ 2.576	4.583 $\pm$ 1.069	11.619 $\pm$ 3.892	7.035 $\pm$ 3.893
M - V	8.077 $\pm$ 1.608	4.058 $\pm$ 0.905	-4.019 $\pm$ 1.132	88.873 $\pm$ 2.181	89.490 $\pm$ 2.109	0.617 $\pm$ 2.488	5.000 $\pm$ 1.537	5.167 $\pm$ 2.055	0.167 $\pm$ 0.824
M - C	8.505 $\pm$ 1.720	21.414 $\pm$ 4.990	12.910 $\pm$ 4.794 *	90.384 $\pm$ 1.637	83.450 $\pm$ 3.124	-6.934 $\pm$ 2.561	4.417 $\pm$ 1.264	10.211 $\pm$ 4.087	5.794 $\pm$ 3.032
Group	Correct Latency (s)			Reward latency (s)			Trials completed		
	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ
V - V	0.466 $\pm$ 0.017	0.465 $\pm$ 0.020	-0.001 $\pm$ 0.015	1.855 $\pm$ 0.092	2.025 $\pm$ 0.319	0.170 $\pm$ 0.252	100 $\pm$ 0	100 $\pm$ 0	0
V - C	0.464 $\pm$ 0.019	0.458 $\pm$ 0.020	-0.006 $\pm$ 0.014	1.617 $\pm$ 0.051	1.730 $\pm$ 0.073	0.113 $\pm$ 0.061	99.667 $\pm$ 0.333	96.417 $\pm$ 3.156	-3.250 $\pm$ 3.208
E - V	0.458 $\pm$ 0.023	0.482 $\pm$ 0.032	0.023 $\pm$ 0.021	1.696 $\pm$ 0.049	1.741 $\pm$ 0.062	0.045 $\pm$ 0.064	99.667 $\pm$ 0.333	99.750 $\pm$ 0.250	0.083 $\pm$ 0.434
E - C	0.458 $\pm$ 0.023	0.469 $\pm$ 0.022	0.011 $\pm$ 0.020	1.835 $\pm$ 0.100	1.695 $\pm$ 0.065	-0.140 $\pm$ 0.070	100 $\pm$ 0	99.333 $\pm$ 0.667	-0.667 $\pm$ 0.667
V - V	0.474 $\pm$ 0.027	0.468 $\pm$ 0.021	-0.007 $\pm$ 0.009	1.760 $\pm$ 0.052	1.969 $\pm$ 0.234	0.209 $\pm$ 0.228	100 $\pm$ 0	100 $\pm$ 0	0
V - C	0.476 $\pm$ 0.027	0.439 $\pm$ 0.023	-0.037 $\pm$ 0.025	1.754 $\pm$ 0.079	1.631 $\pm$ 0.056	-0.123 $\pm$ 0.091	100 $\pm$ 0	91.250 $\pm$ 4.916	-8.750 $\pm$ 4.916
M - V	0.455 $\pm$ 0.021	0.499 $\pm$ 0.021	0.044 $\pm$ 0.011	1.793 $\pm$ 0.072	1.992 $\pm$ 0.061	0.199 $\pm$ 0.090	100 $\pm$ 0	100 $\pm$ 0	0
M - C	0.466 $\pm$ 0.019	0.473 $\pm$ 0.027	0.007 $\pm$ 0.020	1.839 $\pm$ 0.078	1.818 $\pm$ 0.062	-0.021 $\pm$ 0.101	100 $\pm$ 0	89.000 $\pm$ 7.442	-11.000 $\pm$ 7.442

Supplementary Information (Barkus et al) Table3- Raw data of effect of ebselen and MDL 100,907 on behavioural performance in the rGT. Δ values are those used in the main paper. Mean $\pm$ SEM values, n=21. *p<0.05 vs saline.

Dose (mg/kg)	Premature (%)			Response Latency (s)			Reward latency (s)			Trials completed		
	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ
Ebselen												
0	15.385 $\pm$ 1.928	18.736 $\pm$ 2.891	3.351 $\pm$ 2.083	0.635 $\pm$ 0.061	0.606 $\pm$ 0.060	-0.029 $\pm$ 0.035	0.725 $\pm$ 0.043	0.673 $\pm$ 0.048	-0.051 $\pm$ 0.022	119.190 $\pm$ 7.521	114.238 $\pm$ 8.040	-4.952 $\pm$ 2.526
2	16.881 $\pm$ 2.619	14.715 $\pm$ 2.699	-2.166 $\pm$ 2.664	0.654 $\pm$ 0.075	0.759 $\pm$ 0.084	0.105 $\pm$ 0.078	0.716 $\pm$ 0.048	0.774 $\pm$ 0.053	0.057 $\pm$ 0.041 *	118.381 $\pm$ 7.445	116.381 $\pm$ 8.394	-2.000 $\pm$ 4.763
5	17.206 $\pm$ 2.324	16.916 $\pm$ 2.916	-0.290 $\pm$ 1.418	0.637 $\pm$ 0.073	0.783 $\pm$ 0.108	0.146 $\pm$ 0.073 *	0.730 $\pm$ 0.053	0.753 $\pm$ 0.064	0.023 $\pm$ 0.034	115.905 $\pm$ 7.554	116.762 $\pm$ 8.141	0.857 $\pm$ 3.141
10	18.248 $\pm$ 2.948	16.350 $\pm$ 2.827	-1.898 $\pm$ 1.295 *	0.672 $\pm$ 0.080	0.700 $\pm$ 0.077	0.028 $\pm$ 0.035	0.702 $\pm$ 0.049	0.727 $\pm$ 0.051	0.025 $\pm$ 0.024 *	114.571 $\pm$ 7.738	115.429 $\pm$ 8.275	0.857 $\pm$ 3.540
Dose (mg/kg)	P1 (%)			P2 (%)			P3 (%)			P4 (%)		
	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ	Baseline	Drug	Δ
Ebselen												
0	4.213 $\pm$ 1.367	4.697 $\pm$ 1.345	0.484 $\pm$ 0.742	74.738 $\pm$ 5.241	73.720 $\pm$ 5.378	-1.018 $\pm$ 1.433	11.187 $\pm$ 3.518	12.098 $\pm$ 4.093	0.912 $\pm$ 1.415	9.862 $\pm$ 3.005	9.485 $\pm$ 3.238	-0.377 $\pm$ 1.761
2	3.991 $\pm$ 1.545	4.763 $\pm$ 1.452	0.771 $\pm$ 0.565	75.396 $\pm$ 4.670	72.749 $\pm$ 5.529	-2.647 $\pm$ 1.840	11.708 $\pm$ 4.059	11.262 $\pm$ 4.094	-0.446 $\pm$ 1.397	8.904 $\pm$ 2.527	11.226 $\pm$ 3.169	2.322 $\pm$ 1.415
5	5.239 $\pm$ 1.741	5.001 $\pm$ 1.891	-0.238 $\pm$ 0.635	74.024 $\pm$ 4.987	73.616 $\pm$ 5.258	-0.407 $\pm$ 2.114	10.849 $\pm$ 3.790	12.127 $\pm$ 3.634	1.278 $\pm$ 1.502	9.889 $\pm$ 2.817	9.255 $\pm$ 3.067	-0.633 $\pm$ 1.223
10	5.033 $\pm$ 1.608	3.577 $\pm$ 0.993	-1.455 $\pm$ 0.832	74.192 $\pm$ 5.132	74.944 $\pm$ 4.733	0.752 $\pm$ 1.587	10.708 $\pm$ 3.246	11.524 $\pm$ 3.684	0.816 $\pm$ 1.314	10.067 $\pm$ 2.823	9.955 $\pm$ 2.716	-0.112 $\pm$ 1.211