Electronic Supplementary Material (ESI) for Toxicology Research.
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TABLE S1. Results of simple linear regression analyses in saline- and ABT-treated mice for endpoints with significant interaction of ABT treatment and 1BP exposure

endpoints	interaction of [1BP] and [ABT] (model: endpoint = intercept + a[1BP] + b[ABT] + c[1BP]*[ABT])		coefficients of simple linear regression (model: endpoint = intercept + a[1BP])							
			saline-treated mice				ABT-treated mice			
	c (unit of endpoint/ppm)		intercept (unit of endpoint)		a (unit of endpoint/ppm)		intercept (unit of endpoint)		a (unit of endpoint/ppm)	
	estimate	p	estimate	p	estimate	p	estimate	p	estimate	p
sperm motility (%)	-0.077	0.025	82	<0.001	-0.075	0.030	78	<0.001	0.003	0.83
PAS-positive round structures (/tubule)	0.005	0.004	0.31	0.17	0.008	<0.001	0.49	<0.001	0.003	<0.001

Note: ABT-treated and 1200 ppm 1BP-exposed mice were excluded. The presence of interaction of 1BP exposure and ABT treatment was tested in the general linear model: endpoint = intercept + a[1BP] + b[ABT] + c[1BP]*[ABT]. For the above endpoints with significant interaction, single regression analyses were conducted separately in saline-treated mice and ABT-treated mice.

TABLE S2. Results of multiple linear regression analyses for endpoints without significant interaction of 1-BP exposure and ABT treatment

endpoints	coefficient for interaction of 1BP and ABT (model: endpoint = iIntercept + a[1BP] + b[1ABT] + c[1BP]*[ABT])		coefficients for parameters of multiple linear regression (model: endpoint = intercept + a[1BP] + b[ABT])					
	c (unit of endpoint/ppm)		intercept (unit of endpoint)		a (unit of endpoint/ppm)		b (unit of endpoint)	
	estimate	p	estimate	p	estimate	p	Estimate	p
sperm count (/g cauda epididymidis)	-1.3×10^{6}	0.051	6.4×10^{8}	<0.001	-5.0×10^{5}	0.16	4.9×10^{7}	0.52
morphologically abnormal sperm (%)	3.0×10^{-5}	0.79	0.21	<0.001	1.2×10^{-4}	0.037	0.019	0.11
retained elongated spermatids (/tubule)	0.001	0.54	1.0	<0.001	0.001	0.065	-0.37	0.021
spermatogonia (/tubule)	-5.6×10^{-4}	0.71	1.0	<0.001	-7.5×10^{-4}	0.33	-0.037	0.82
preleptotene spermatocytes (/tubule)	0.016	0.56	47	<0.001	0.012	0.39	0.36	0.90
pachytene spermatocytes (/tubule)	0.018	0.40	56	<0.001	0.008	0.46	0.80	0.73
round spermatid (/tubule)	0.026	0.56	152	<0.001	-0.012	0.59	3.2	0.50
spermatogonia (/100 Sertoli)	-0.014	0.42	9.6	<0.001	-0.011	0.21	-1.1	0.54
preleptotene spermatocytes (/100 Sertoli)	-0.16	0.47	402	<0.001	0.042	0.70	-25	0.28
pachytene spermatocytes (/100 Sertoli)	-0.21	0.27	478	<0.001	-0.010	0.91	-33	0.12
round spermatid (/100 Sertoli)	-0.78	0.25	1319	<0.001	-0.34	0.32	-77	0.30
body weight (g)	-0.002	0.63	23	<0.001	-0.007	0.004	0.28	0.54
spleen weight (mg)	1.2×10^{-5}	0.99	0.052	<0.001	-1.3×10^{-5}	0.12	-3.4×10^{-4}	0.85
kidney weight (g)	5.1×10^{-7}	0.49	0.30	<0.001	-5.2×10^{-5}	0.062	3.3×10^{-4}	0.96
epididymis weight (mg)	7.5×10^{-6}	0.72	0.081	<0.001	-1.2×10^{-5}	0.24	-0.003	0.12
testis weight (g)	-6.9×10^{-5}	0.093	0.21	<0.001	-4.2×10^{-6}	0.84	-4.6×10^{-4}	0.92
prostate plus seminal vesical weight (g)	-1.1×10^{-5}	0.92	0.28	<0.001	-2.2×10^{-4}	<0.001	-0.016	0.16

Note: ABT-treated and 1200 ppm 1BP-exposed mice were excluded in the analysis. The presence of interaction of 1BP exposure and ABT treatment was tested in the general linear model: endpoint = intercept + a[1BP] + b[ABT] + c[1BP]*[ABT]. For the above endpoints without significant interaction, multiple regression analyses were conducted with the model: endpoint = intercept + a[1BP] + b[ABT].

TABLE S3. Student's *t*-test for each endpoint comparing saline- and ABT- treated groups at 0, 50 and 250 ppm of 1BP concentrations

co-treatment	saline			ABT		
1BP (ppm)	0	50	250	0	50	250
sperm count ($\times 10^8$/g cauda)	7.9±1.9	5.3±2.5	4.2±0.7	5.9±1.8	6.7±2.3	6.5±2.2
sperm motility (%)	85±3	75±12	65±21	79.9±4.0*	76.1±7.4	79.4±5.3
morphologically abnormal sperm (%)	20.6±2.6	20.9±3.1	23.8±5.0	22.1±2.9	23.9±2.8	25.1±4.6
retained elongated spermatids (/tubule)	0.64±0.32	1.55±0.48	1.32±0.32	0.60±0.40	0.85±0.45*	0.89±0.15*
PAS-positive round structures (/tubule)	0.3±0.1	0.8±0.5	2.4±1.2	0.42±0.16	0.76±0.27	1.28±0.26*
spermatogonia (/tubule)	1.00±0.55	1.08±0.52	0.78±0.30	0.93±0.47	1.03±0.26	0.84±0.44
preleptotene spermatocytes (/tubule)	44±11	51±9	51±8	48.6±8.7	48.4±7.8	49.5±6.2
pachytene spermatocytes (/tubule)	54.3±7.6	56.1±6.4	58.9±5.9	57.5±7.6	56.9±8.9	57.2±4.5
round spermatids (/tubule)	155±13	144±11	152±21	157±16	154±12	150±6
spermatogonia (/100 Sertoli nuclei)	10.6±8.8	8.7±3.8	5.9±1.9	7.3±4.3	8.6±2.8	6.7±3.5
preleptotene permatocytes (/100 Sertoli nuclei)	412±101	403±75	400±40	362±58	385±51	396±64
pachytene spermatocytes (/100 Sertoli nuclei)	514±94	450±67	466±18	429±46	450±36	457±48
round spermatids ($\times 10^2$/100 Sertoli nuclei)	14.80±3.0	11.64±1.4	12.0±1.5	11.8±1.8	12.4±2.1	12.0±1.5
body weight (g)	25.6±0.7	25.4±1.6	25.5±0.7	25.2±0.9	24.8±1.2	24.8±1.0
spleen weight (mg)	53.6±4.3	48.6±6.9	50.6±3.8	54.5±4.8	47.8±3.8	48.2±1.9
kidney weight (g)	0.31±0.01	0.29±0.02	0.29±0.01	0.31±0.01	0.29±0.01	0.29±0.02
epididymis weight (mg)	81±2	80±11	79±10	78.4±2.7	76.3±4.6	74.1±3.7
testis weight (g)	0.22±0.01	0.20±0.02	0.21±0.01	0.21±0.01	0.20±0.01	0.21±0.01
prostate plus seminal vesicle weight (g)	0.28±0.04	0.26±0.02	0.22±0.03	0.26±0.03	0.25±0.05	0.21±0.04

*$p<0.05$, significantly different between saline- and ABT-treated groups at each exposure levels, 0, 50 or 250ppm of 1-BP concentrations (Student's *t*-test).