





Supplemental Table S1. Generational Data on Two Replicated Selections for Blood Ethanol Concentration (BEC) after Drinking in the Dark

		HDID-1					HDID-2				
Selection Generation	Sex or Selected Parents	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)
<b>S<sub>0</sub></b>	<b>Female</b>	82	0.35 ± 0.05	4.7 ± 0.26	87.8 ± 0.9	20.9 ± 0.3	96	0.32 ± 0.04	5.1 ± 0.23	75.6 ± 0.2	21.3 ± 0.3
	<b>Male</b>	75	0.24 ± 0.05	3.3 ± 0.20	86.9 ± 0.9	25.9 ± 0.3	114	0.25 ± 0.04	3.7 ± 0.18	75.9 ± 0.2	26.4 ± 0.3
	<b>Parents</b>	30	0.97 ± 0.07 (S = 0.674)	5.5 ± 0.36	--	--	38	0.97 ± 0.05 (S = 0.684)	6.0 ± 0.33		
<b>S<sub>1</sub></b>	<b>Female</b>	81	0.31 ± 0.04	4.6 ± 0.24	66.3 ± 0.5	20.1 ± 0.2	72	0.27 ± 0.04	5.5 ± 0.29	61.3 ± 0.3	19.6 ± 0.2
	<b>Male</b>	57	0.34 ± 0.06	4.1 ± 0.32	67.2 ± 0.5	25.7 ± 0.5	95	0.36 ± 0.04	4.6 ± 0.22	60.5 ± 0.4	23.6 ± 0.2
	<b>Parents</b>	30	0.78 ± 0.08 (S = 0.460)	5.8 ± 0.38	--	--	40	0.88 ± 0.05 (S = 0.562)	6.0 ± 0.41		
<b>S<sub>2</sub></b>	<b>Female</b>	67	0.47 ± 0.05	5.1 ± 0.27	65.7 ± 0.5	21.2 ± 0.2	83	0.40 ± 0.04	5.8 ± 0.27	96.2 ± 0.6	21.9 ± 0.2
	<b>Male</b>	58	0.25 ± 0.04	3.6 ± 0.30	66.3 ± 0.5	26.7 ± 0.3	88	0.32 ± 0.04	3.8 ± 0.20	96.5 ± 0.6	27.6 ± 0.3
	<b>Parents</b>	30	0.77 ± 0.07 (S = 0.398)	5.5 ± 0.36	--	--	44	0.90 ± 0.04 (S = 0.538)	6.6 ± 0.37		
<b>S<sub>3</sub></b>	<b>Female</b>	70	0.61 ± 0.08	5.6 ± 0.27	56.1 ± 0.1	19.3 ± 0.2	96	0.60 ± 0.05	6.5 ± 0.21	81.0 ± 0.4	21.1 ± 0.1
	<b>Male</b>	55	0.58 ± 0.08	4.7 ± 0.26	56.1 ± 0.1	24.4 ± 0.3	71	0.46 ± 0.05	4.7 ± 0.25	81.3 ± 0.5	26.3 ± 0.4
	<b>Parents</b>	30	1.09 ± 0.10 (S = 0.496)	6.5 ± 0.30	--	--	46	1.13 ± 0.04 (S = 0.591)	6.8 ± 0.27		
<b>S<sub>4</sub></b>	<b>Female</b>	49	0.40 ± 0.06	5.4 ± 0.28	82.4 ± 0.4	22.0 ± 0.3	92	0.49 ± 0.04	6.5 ± 0.22	66.5 ± 0.5	19.3 ± 0.2
	<b>Male</b>	59	0.45 ± 0.05	4.8 ± 0.25	82.9 ± 0.2	26.5 ± 0.3	72	0.48 ± 0.05	5.1 ± 0.24	66.5 ± 0.6	24.4 ± 0.3
	<b>Parents</b>	32	0.87 ± 0.07 (S = 0.441)	6.4 ± 0.30	--	--	40	1.07 ± 0.04 (S = 0.589)	7.0 ± 0.24		

		HDID-1					HDID-2				
Selection Generation	Sex or Selected Parents	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)
<b>S<sub>5</sub></b>	<b>Female</b>	82	0.62 ± 0.05	6.3 ± 0.30	65.5 ± 0.5	20.3 ± 0.2	84	0.40 ± 0.05	6.9 ± 0.26	85.3 ± 0.7	21.5 ± 0.2
	<b>Male</b>	69	0.60 ± 0.06	5.0 ± 0.25	62.6 ± 0.7	24.6 ± 0.3	84	0.38 ± 0.05	5.3 ± 0.25	86.5 ± 0.6	27.9 ± 0.3
	<b>Parents</b>	36	1.19 ± 0.07 (S = 0.583)	6.8 ± 0.37	--	--	40	1.11 ± 0.06 (S = 0.718)	7.3 ± 0.32		
<b>S<sub>6</sub></b>	<b>Female</b>	78	0.56 ± 0.05	5.8 ± 0.23	70.7 ± 0.3	21.0 ± 0.3	82	0.47 ± 0.05	5.8 ± 0.24	91.8 ± 0.5	21.9 ± 0.2
	<b>Male</b>	84	0.50 ± 0.05	4.5 ± 0.23	70.7 ± 0.2	25.0 ± 0.3	85	0.60 ± 0.06	4.3 ± 0.21	92.1 ± 0.5	28.2 ± 0.4
	<b>Parents</b>	34	1.20 ± 0.04 (S = 0.675)	6.5 ± 0.29	--	--	40	1.20 ± 0.05 (S = 0.659)	6.3 ± 0.30		
<b>S<sub>7</sub></b>	<b>Female</b>	66	0.66 ± 0.06	5.7 ± 0.26	70.3 ± 0.5	19.0 ± 0.2	86	0.62 ± 0.06	6.5 ± 0.25	80.3 ± 0.3	21.5 ± 0.2
	<b>Male</b>	84	0.63 ± 0.06	5.0 ± 0.27	70.7 ± 0.4	24.3 ± 0.3	80	0.48 ± 0.06	5.2 ± 0.23	80.1 ± 0.4	27.3 ± 0.4
	<b>Parents</b>	36	1.33 ± 0.04 (S = 0.687)	6.6 ± 0.29	--	--	40	1.25 ± 0.05 (S = 0.695)	6.8 ± 0.27		
<b>S<sub>8</sub><sup>*</sup></b>	<b>Female</b>	127	0.70 ± 0.05	5.8 ± 0.18	103.3 ± 0.9	22.2 ± 0.2	88	0.74 ± 0.07	6.2 ± 0.23	66.9 ± 0.1	21.4 ± 0.2
	<b>Male</b>	139	0.63 ± 0.04	4.3 ± 0.15	101.9 ± 1.0	27.6 ± 0.2	80	0.57 ± 0.06	4.5 ± 0.22	66.8 ± 0.1	27.3 ± 0.3
	<b>Parents</b>	32	1.54 ± 0.06 (S = 0.881)	6.2 ± 0.36	--	--	38	1.46 ± 0.05 (S = 0.801)	6.9 ± 0.26	--	--
<b>S<sub>9</sub><sup>*</sup></b>	<b>Female</b>	67	0.90 ± 0.07	6.2 ± 0.24	60.7 ± 0.9	18.9 ± 0.2	82	0.83 ± 0.06	6.4 ± 0.23	59.2 ± 0.4	19.7 ± 0.2
	<b>Male</b>	69	0.84 ± 0.08	5.4 ± 0.27	60.3 ± 0.9	23.5 ± 0.3	83	0.72 ± 0.06	5.2 ± 0.20	59.3 ± 0.4	25.0 ± 0.2
	<b>Parents</b>	38	1.55 ± 0.05 (S = 0.679)	7.3 ± 0.28	--	--	38	1.50 ± 0.04 (S = 0.722)	6.9 ± 0.21	--	--

		HDID-1					HDID-2				
Selection Generation	Sex or Selected Parents	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)
<b>S<sub>10</sub></b>	<b>Female</b>	74	0.83 ± 0.07	6.6 ± 0.29	73.4 ± 0.6	20.5 ± 0.2	72	0.77 ± 0.06	6.4 ± 0.27	68.5 ± 0.3	20.3 ± 0.2
	<b>Male</b>	93	0.66 ± 0.06	5.4 ± 0.27	73.6 ± 0.5	25.3 ± 0.3	90	0.94 ± 0.06	5.7 ± 0.20	68.8 ± 0.3	25.5 ± 0.3
	<b>Parents</b>	38	1.53 ± 0.05 (S = 0.797)	7.7 ± 0.38	--	--	38	1.57 ± 0.05 (S = 0.701)	6.9 ± 0.30	--	--
<b>S<sub>11</sub></b>	<b>Female</b>	86	1.14 ± 0.06	7.0 ± 0.23	71.1 ± 0.6	20.2 ± 0.3	71	0.86 ± 0.08	6.1 ± 0.24	79.0 ± 0.5	21.8 ± 0.3
	<b>Male</b>	81	1.02 ± 0.07	5.8 ± 0.25	70.4 ± 0.7	25.0 ± 0.3	92	0.88 ± 0.06	5.2 ± 0.20	79.9 ± 0.3	27.0 ± 0.3
	<b>Parents</b>	36	1.80 ± 0.04 (S = 0.718)	7.6 ± 0.34	--	--	28	1.59 ± 0.06 (S = 0.721)	7.1 ± 0.31	--	--
<b>S<sub>12</sub></b>	<b>Female</b>	81	0.99 ± 0.08	6.2 ± 0.25	75.8 ± 0.2	20.1 ± 0.2	62	1.24 ± 0.08	8.1 ± 0.29	61.6 ± 0.3	19.9 ± 0.2
	<b>Male</b>	76	0.91 ± 0.07	5.0 ± 0.23	75.9 ± 0.2	25.0 ± 0.3	72	1.01 ± 0.07	6.3 ± 0.18	61.7 ± 0.3	24.6 ± 0.3
	<b>Parents</b>	40	1.78 ± 0.07 (S = 0.826)	7.2 ± 0.25	--	--	30	1.84 ± 0.07 (S = 0.723)	8.0 ± 0.30	--	--
<b>S<sub>13</sub></b>	<b>Female</b>	85	0.90 ± 0.05	6.6 ± 0.24	91.5 ± 0.5	20.5 ± 0.2	53	1.04 ± 0.08	7.8 ± 0.35	74.0 ± 0.2	22.6 ± 0.5
	<b>Male</b>	83	0.78 ± 0.07	5.0 ± 0.21	91.3 ± 0.6	25.9 ± 0.4	75	0.93 ± 0.06	5.7 ± 0.22	74.2 ± 0.2	27.7 ± 0.4
	<b>Parents</b>	36	1.56 ± 0.06 (S = 0.720)	6.6 ± 0.25	--	--	36	1.58 ± 0.05 (S = 0.606)	8.3 ± 0.36	--	--
<b>S<sub>14</sub></b>	<b>Female</b>	69	1.01 ± 0.07	5.7 ± 0.24	87.3 ± 0.5	21.5 ± 0.3	63	0.86 ± 0.06	7.0 ± 0.30	81.3 ± 0.2	22.2 ± 0.3
	<b>Male</b>	72	0.84 ± 0.07	4.5 ± 0.27	86.8 ± 0.5	26.9 ± 0.3	80	0.86 ± 0.05	5.4 ± 0.21	81.5 ± 0.2	29.6 ± 0.4
	<b>Parents</b>	36	1.64 ± 0.06 (S = 0.712)	6.3 ± 0.35	--	--	36	1.39 ± 0.03 (S = 0.532)	7.0 ± 0.22	--	--

		HDID-1					HDID-2				
Selection Generation	Sex or Selected Parents	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)
<b>S<sub>15</sub></b>	<b>Female</b>	82	0.91 ± 0.07	6.1 ± 0.29	63.0 ± 0.4	19.6 ± 0.2	79	1.05 ± 0.07	7.2 ± 0.21	82.5 ± 1.5	21.6 ± 0.3
	<b>Male</b>	85	0.80 ± 0.06	4.6 ± 0.19	61.7 ± 0.6	23.5 ± 0.2	83	1.00 ± 0.07	5.7 ± 0.20	79.8 ± 1.2	27.8 ± 0.4
	<b>Parents</b>	40	1.61 ± 0.05 (S = 0.750)	6.9 ± 0.34	--	--	34	1.81 ± 0.05 (S = 0.787)	7.6 ± 0.31	--	--
<b>S<sub>16</sub></b>	<b>Female</b>	75	1.17 ± 0.08	6.1 ± 0.25	59.8 ± 0.4	19.1 ± 0.2	86	1.24 ± 0.06	8.1 ± 0.24	65.1 ± 1.0	20.2 ± 0.2
	<b>Male</b>	82	1.18 ± 0.08	5.7 ± 0.26	59.1 ± 0.4	23.5 ± 0.3	74	1.04 ± 0.06	6.3 ± 0.21	64.1 ± 1.3	25.6 ± 0.3
	<b>Parents</b>	40	2.04 ± 0.05 (S = 0.866)	7.1 ± 0.21	--	--	36	1.80 ± 0.06 (S = 0.656)	8.3 ± 0.28	--	--
<b>S<sub>17</sub></b>	<b>Female</b>	77	1.16 ± 0.07	6.1 ± 0.23	66.5 ± 0.5	19.6 ± 0.2	79	1.24 ± 0.06	7.8 ± 0.22	80.1 ± 1.5	22.5 ± 0.2
	<b>Male</b>	81	1.14 ± 0.07	5.2 ± 0.20	66.1 ± 0.5	24.3 ± 0.3	73	1.10 ± 0.07	5.8 ± 0.24	72.8 ± 1.5	27.7 ± 0.4
	<b>Parents</b>	36	1.87 ± 0.05 (S = 0.726)	7.1 ± 0.30	--	--	32	1.83 ± 0.05 (S = 0.664)	7.7 ± 0.33	--	--
<b>S<sub>18</sub></b>	<b>Female</b>	80	1.02 ± 0.07	6.9 ± 0.23	64.7 ± 0.5	19.1 ± 0.2	59	1.28 ± 0.06	7.7 ± 0.31	73.6 ± 1.6	21.6 ± 0.3
	<b>Male</b>	74	1.07 ± 0.09	5.8 ± 0.21	64.6 ± 0.5	23.0 ± 0.3	69	1.15 ± 0.09	5.9 ± 0.24	78.2 ± 1.6	27.1 ± 0.4
	<b>Parents</b>	34	1.90 ± 0.06 (S = 0.859)	7.4 ± 0.38	--	--	38	1.91 ± 0.06 (S = 0.721)	8.0 ± 0.28	--	--
<b>S<sub>19</sub></b>	<b>Female</b>	59	1.22 ± 0.09	6.4 ± 0.21	64.6 ± 0.4	19.2 ± 0.2	66	1.06 ± 0.06	7.7 ± 0.24	89.5 ± 1.0	22.6 ± 0.3
	<b>Male</b>	75	1.27 ± 0.10	5.8 ± 0.20	64.3 ± 0.4	22.9 ± 0.2	65	1.21 ± 0.07	6.3 ± 0.27	89.7 ± 1.0	28.5 ± 0.5
	<b>Parents</b>	34	2.13 ± 0.07 (S = 0.883)	7.2 ± 0.16	--	--		1.70 ± 0.04 (S = 0.562)	8.0 ± 0.27	--	--

		HDID-1					HDID-2				
Selection Generation	Sex or Selected Parents	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)
<b>S<sub>20</sub></b>	<b>Female</b>	63	1.24 ± 0.09	7.3 ± 0.26	65.6 ± 0.2	18.5 ± 0.2	60	1.39 ± 0.08	7.9 ± 0.30	73.4 ± 0.5	22.4 ± 0.4
	<b>Male</b>	56	1.46 ± 0.11	6.7 ± 0.28	65.9 ± 0.2	23.2 ± 0.3	65	1.13 ± 0.07	6.2 ± 0.17	73.2 ± 0.5	26.9 ± 0.3
	<b>Parents</b>	36	2.22 ± 0.07 (S = 0.880)	8.0 ± 0.27	--	--				--	--
<b>S<sub>21</sub></b>	<b>Female</b>	74	1.22 ± 0.08	6.5 ± 0.25	82.6 ± 0.23	19.2 ± 0.2					
	<b>Male</b>	90	1.22 ± 0.08	5.6 ± 0.23	83.1 ± 0.14	23.9 ± 0.3					
	<b>Parents</b>	36	2.10 ± 0.05 (S = 0.881)	7.7 ± 0.31	--	--					
<b>S<sub>22</sub></b>	<b>Female</b>	98	1.16 ± 0.07	6.6 ± 0.24	66.4 ± 0.5	18.3 ± 0.2					
	<b>Male</b>	70	1.10 ± 0.08	5.1 ± 0.21	65.8 ± 0.6	23.3 ± 0.2					
	<b>Parents</b>	36	1.98 ± 0.05 (S = 0.852)	7.4 ± 0.38	--	--					
<b>S<sub>23</sub></b>	<b>Female</b>	66	1.28 ± 0.09	6.39 ± 0.27	65.9 ± 1.2	18.3 ± 0.2					
	<b>Male</b>	75	1.32 ± 0.09	6.0 ± 0.26	63.9 ± 1.1	22.9 ± 0.3					
	<b>Parents</b>	38	2.09 ± 0.04 (S = 0.788)	7.3 ± 0.26	--	--					
<b>S<sub>24</sub></b>	<b>Female</b>	67	1.03 ± 0.09	6.7 ± 0.27	79.5 ± 1.7	19.4 ± 0.3					
	<b>Male</b>	76	0.96 ± 0.08	5.8 ± 0.18	79.6 ± 1.7	24.0 ± 0.3					
	<b>Parents</b>	40	1.83 ± 0.05 (S = 0.832)	7.5 ± 0.26	--	--					

		HDID-1					HDID-2				
Selection Generation	Sex or Selected Parents	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)	N	BEC (mg/ml)	4 hr Consumption (g/kg)	Age (d)	Body Weight (g)
<b>S<sub>25</sub></b>	<b>Female</b>	57	1.18 ± 0.09	6.2 ± 0.28	71.0 ± 1.9	18.4 ± 0.2					
	<b>Male</b>	84	1.16 ± 0.08	6.2 ± 0.30	72.7 ± 1.5	23.6 ± 0.2					
	<b>Parents</b>	36	1.96 ± 0.09 (S = 0.789)	6.7 ± 0.28	--	--					
<b>S<sub>26</sub></b>	<b>Female</b>	46	1.32 ± 0.10	7.6 ± 0.26	91.8 ± 1.1	18.9 ± 0.3					
	<b>Male</b>	52	1.35 ± 0.10	6.3 ± 0.29	92.6 ± 0.9	23.5 ± 0.3					
	<b>Parents</b>	34	2.00 ± 0.05 (S = 0.660)	8.0 ± 0.21	--	--					
<b>S<sub>27</sub></b>	<b>Female</b>	55	1.29 ± 0.08	7.1 ± 0.23	65.5 ± 0.2	18.0 ± 0.3					
	<b>Male</b>	48	1.61 ± 0.10	7.0 ± 0.30	65.5 ± 0.2	23.1 ± 0.4					

\* In these generations, first and second litters were tested.



Supplemental Table S2. Cumulative Inbreeding Coefficients during Selection

Selection Generation	HDID-1			HDID-2		
	Number of Families	$N_e^*$	Cum $\Delta F$	Number of Families	$N_e^*$	Cum $\Delta F$
S <sub>0</sub>	15	--	--	19	--	--
S <sub>1</sub>	15	62	0.008	20	42	0.012
S <sub>2</sub>	15	62	0.016	22	46	0.023
S <sub>3</sub>	15	62	0.024	23	48	0.033
S <sub>4</sub>	16	66	0.032	20	42	0.045
S <sub>5</sub>	18	74	0.039	20	42	0.057
S <sub>6</sub>	17	36	0.052	20	42	0.069
S <sub>7</sub>	18	38	0.066	20	42	0.081
S <sub>8</sub>	16	34	0.080	19	40	0.093
S <sub>9</sub>	19	40	0.093	19	40	0.106
S <sub>10</sub>	19	40	0.105	19	40	0.118
S <sub>11</sub>	18	38	0.118	14	30	0.135
S <sub>12</sub>	20	42	0.130	15	32	0.151
S <sub>13</sub>	18	38	0.143	18	38	0.164
S <sub>14</sub>	18	38	0.157	18	38	0.177
S <sub>15</sub>	20	42	0.169	17	36	0.191
S <sub>16</sub>	20	42	0.180	18	38	0.204
S <sub>17</sub>	18	38	0.194	16	34	0.219
S <sub>18</sub>	17	36	0.208	19	40	0.231
S <sub>19</sub>	17	36	0.221	20	42	0.243
S <sub>20</sub>	18	38	0.235			
S <sub>21</sub>	18	38	0.248			
S <sub>22</sub>	18	38	0.261			

	HDID-1			HDID-2		
S <sub>23</sub>	19	40	0.273			
S <sub>24</sub>	20	42	0.285			
S <sub>25</sub>	18	38	0.298			
S <sub>26</sub>	17	36	0.312			

\* N<sub>e</sub> changes as a function of number of breeders and breeding scheme (Falconer & Mackay, 1996).

Supplemental Table S3. Percent Intake during Last 2 hrs of 4 hr DID Test for Several Generations

	HDID-1	HDID-2
Selection Generation	Percentage of total consumed in hrs 2-4	Percentage of total consumed in hrs 2-4
S <sub>0</sub>	60.9 ± 1.8	56.0 ± 1.3
S <sub>1</sub>	59.3 ± 1.6	63.2 ± 1.1
S <sub>2</sub>	59.5 ± 1.9	59.8 ± 1.4
S <sub>3</sub>	58.4 ± 1.7	63.1 ± 1.3
S <sub>4</sub>	61.3 ± 1.4	60.7 ± 1.4
S <sub>5</sub>	62.6 ± 1.5	60.6 ± 1.3
S <sub>6</sub>	58.2 ± 1.1	66.5 ± 1.2
S <sub>7</sub>	59.4 ± 1.5	62.4 ± 1.2
S <sub>8</sub>	57.5 ± 1.2	62.4 ± 1.5
S <sub>9</sub>	61.2 ± 1.6	58.7 ± 1.3
S <sub>10</sub>	57.6 ± 1.5	64.0 ± 1.2
S <sub>11</sub>	61.6 ± 1.3	60.8 ± 1.5
S <sub>12</sub>	59.9 ± 1.5	57.8 ± 1.2

	<b>HDID-1</b>	<b>HDID-2</b>
S <sub>13</sub>	59.3 ± 1.2	56.8 ± 1.3
S <sub>14</sub>	62.8 ± 1.5	60.0 ± 1.3
S <sub>15</sub>	62.8 ± 1.5	56.6 ± 1.3
S <sub>16</sub>	63.1 ± 1.8	59.4 ± 1.3
S <sub>17</sub>	60.2 ± 1.6	53.7 ± 1.3
S <sub>18</sub>	58.4 ± 1.5	58.2 ± 1.5
S <sub>19</sub>	58.3 ± 1.7	54.9 ± 1.4
S <sub>20</sub>	56.9 ± 1.8	53.0 ± 1.6
S <sub>21</sub>	59.9 ± 1.4	
S <sub>22</sub>	58.9 ± 1.6	
S <sub>23</sub>	61.1 ± 1.7	
S <sub>24</sub>	60.5 ± 1.6	
S <sub>25</sub>	58.2 ± 1.8	
S <sub>26</sub>	55.5 ± 1.8	
S <sub>27</sub>	54.7 ± 2.1	
Average	59.6 ± 0.4	59.4 ± 0.8