Additional file – Supplementary Results: Housing System Comparisons

Pairwise comparisons of vehicle control groups across housing systems (Type IV conventional cage, TRCC, RCC) at Day 29 and Day 57. Two-sided Welch's t-test, $\alpha = 0.05$. Raw and Benjamini-Hochberg (BH) adjusted p-values are reported.

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Table SR1 – Type IV conventional cage vs. TRCC vehicle – Day 29

Domain	Parameter	Conventional cage vehicle	TRCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Hematology	Basophils	0.05 +/- 0.02 (n=15)	0.04 +/- 0.01 (n=15)	0.01 [0.00, 0.02]	0.046	0.446
Hematology	Eosinophils	0.13 +/- 0.04 (n=15)	0.10 +/- 0.03 (n=15)	0.03 [0.00, 0.06]	0.038	0.446
Hematology	Haemoglobin	15.92 +/- 0.50 (n=15)	15.55 +/- 0.48 (n=15)	0.37 [0.01, 0.74]	0.046	0.446
Hematology	Lymphocytes	5.48 +/- 1.01 (n=15)	5.02 +/- 1.13 (n=15)	0.46 [-0.34, 1.26]	0.246	0.689
Hematology	White blood cells	7.04 +/- 1.09 (n=15)	6.50 +/- 1.34 (n=15)	0.54 [-0.37, 1.45]	0.235	0.689
Hematology	Monocytes	0.17 +/- 0.04 (n=15)	0.16 +/- 0.05 (n=15)	0.01 [-0.03, 0.04]	0.650	0.903
Hematology	Red blood cells	8.60 +/- 0.38 (n=15)	8.55 +/- 0.31 (n=15)	0.04 [-0.22, 0.31]	0.734	0.903
Hematology	Reticulocytes	186.45 +/- 31.49 (n=15)	189.75 +/- 26.08 (n=15)	-3.30 [-24.96, 18.36]	0.757	0.908
Hematology	Neutrophils	1.20 +/- 0.32 (n=15)	1.17 +/- 0.28 (n=15)	0.03 [-0.20, 0.26]	0.798	0.935
Hematology	Haematocrit	45.90 +/- 1.51 (n=15)	45.87 +/- 1.39 (n=15)	0.03 [-1.06, 1.11]	0.960	0.967
Hematology	Platelets	817.93 +/- 97.12 (n=15)	816.27 +/- 96.43 (n=15)	1.67 [-70.72, 74.05]	0.963	0.967
Clinical chemistry	Inorganic phosphate	2.24 +/- 0.17 (n=15)	2.39 +/- 0.14 (n=15)	-0.15 [-0.26, -0.04]	0.012	0.446
Clinical chemistry	ALAT	35.80 +/- 4.84 (n=15)	33.73 +/- 4.65 (n=15)	2.07 [-1.49, 5.62]	0.243	0.689
Clinical chemistry	Albumin	39.77 +/- 1.17 (n=15)	39.31 +/- 0.83 (n=15)	0.47 [-0.30, 1.23]	0.219	0.689
Clinical chemistry	ALP	93.13 +/- 14.56 (n=15)	104.60 +/- 23.62 (n=15)	-11.47 [-26.28, 3.34]	0.123	0.689
Clinical chemistry	Creatinine	19.07 +/- 2.34 (n=15)	18.07 +/- 2.40 (n=15)	1.00 [-0.78, 2.78]	0.259	0.689
Clinical chemistry	Glucose	4.59 +/- 0.49 (n=15)	4.86 +/- 0.51 (n=15)	-0.27 [-0.64, 0.11]	0.155	0.689
Clinical chemistry	Sodium	145.66 +/- 1.07 (n=15)	145.17 +/- 0.97 (n=15)	0.49 [-0.27, 1.26]	0.196	0.689
Clinical chemistry	Total protein	61.39 +/- 2.08 (n=15)	60.22 +/- 1.60 (n=15)	1.17 [-0.22, 2.57]	0.095	0.689
Clinical chemistry	Triglycerides	0.82 +/- 0.28 (n=15)	0.97 +/- 0.24 (n=15)	-0.15 [-0.35, 0.04]	0.125	0.689
Clinical chemistry	Calcium	2.50 +/- 0.08 (n=15)	2.52 +/- 0.07 (n=15)	-0.03 [-0.08, 0.03]	0.342	0.702
Clinical chemistry	Potassium	4.38 +/- 0.27 (n=15)	4.54 +/- 0.57 (n=15)	-0.16 [-0.50, 0.18]	0.344	0.702
Clinical chemistry	ASAT	86.13 +/- 6.02 (n=15)	83.07 +/- 11.61 (n=15)	3.07 [-3.96, 10.09]	0.374	0.718
Clinical chemistry	GLDH	6.10 +/- 0.70 (n=15)	6.39 +/- 1.20 (n=15)	-0.29 [-1.04, 0.45]	0.423	0.781
Clinical chemistry	Chloride	103.09 +/- 1.73 (n=15)	102.66 +/- 1.74 (n=15)	0.43 [-0.87, 1.72]	0.506	0.895
Clinical chemistry	Urea	5.29 +/- 0.45 (n=15)	5.17 +/- 0.61 (n=15)	0.13 [-0.27, 0.53]	0.522	0.895
Clinical chemistry	Bilirubin	0.97 +/- 0.24 (n=15)	0.92 +/- 0.31 (n=15)	0.05 [-0.16, 0.25]	0.648	0.903
Clinical chemistry	Cholesterol	1.58 +/- 0.26 (n=15)	1.56 +/- 0.17 (n=15)	0.02 [-0.15, 0.18]	0.845	0.943
Organ weights	Adrenals	0.0226 +/- 0.0025 (n=10)	0.0202 +/- 0.0020 (n=10)	0.0024 [0.0002, 0.0045]	0.031	0.446
Organ weights	Epididymides	0.3876 +/- 0.0289 (n=10)	0.4112 +/- 0.0444 (n=10)	-0.0237 [-0.0593, 0.0119]	0.178	0.689
Organ weights	Liver	2.9166 +/- 0.1386 (n=10)	2.9886 +/- 0.1651 (n=10)	-0.0721 [-0.2156, 0.0715]	0.305	0.702

Domain	Parameter	Conventional cage vehicle	TRCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Organ weights	Seminal Vesicles	0.3338 +/- 0.1025 (n=10)	0.3716 +/- 0.0602 (n=10)	-0.0379 [-0.1182, 0.0425]	0.330	0.702
Organ weights	(Para)thyroids	0.0066 +/- 0.0011 (n=10)	0.0062 +/- 0.0008 (n=10)	0.0004 [-0.0005, 0.0014]	0.351	0.702
Organ weights	Brain	0.7504 +/- 0.0585 (n=10)	0.7607 +/- 0.0455 (n=10)	-0.0103 [-0.0597, 0.0391]	0.666	0.903
Organ weights	Prostate	0.2620 +/- 0.0402 (n=10)	0.2550 +/- 0.0410 (n=10)	0.0069 [-0.0312, 0.0451]	0.708	0.903
Organ weights	Spleen	0.1956 +/- 0.0211 (n=10)	0.1999 +/- 0.0246 (n=10)	-0.0042 [-0.0258, 0.0173]	0.684	0.903
Organ weights	Terminal BW	283.4000 +/- 22.3617 (n=10)	280.0000 +/- 20.7096 (n=10)	3.4000 [-16.8575, 23.6575]	0.728	0.903
Organ weights	Testes	1.1450 +/- 0.1033 (n=10)	1.1664 +/- 0.0852 (n=10)	-0.0214 [-0.1106, 0.0678]	0.619	0.903
Organ weights	Thymus	0.1405 +/- 0.0251 (n=10)	0.1466 +/- 0.0271 (n=10)	-0.0061 [-0.0307, 0.0185]	0.608	0.903
Organ weights	Kidneys	0.7205 +/- 0.0494 (n=10)	0.7241 +/- 0.0611 (n=10)	-0.0037 [-0.0561, 0.0487]	0.884	0.964
Organ weights	Heart	0.3472 +/- 0.0258 (n=10)	0.3464 +/- 0.0352 (n=10)	0.0008 [-0.0284, 0.0300]	0.954	0.967
Immunology	T Cells	2.80 +/- 0.56 (n=10)	2.46 +/- 0.57 (n=10)	0.34 [-0.19, 0.87]	0.198	0.689
Immunology	TC Cells	0.79 +/- 0.21 (n=10)	0.66 +/- 0.21 (n=10)	0.13 [-0.07, 0.33]	0.189	0.689
Immunology	TH Cells	1.96 +/- 0.30 (n=10)	1.85 +/- 0.46 (n=10)	0.11 [-0.26, 0.47]	0.547	0.903
Immunology	IgA	32266.95 +/- 7199.22 (n=10)	33957.40 +/- 9127.94 (n=10)	-1690.45 [-9444.13, 6063.23]	0.651	0.903
Immunology	B Cells	1.87 +/- 0.62 (n=10)	1.93 +/- 0.71 (n=10)	-0.06 [-0.69, 0.56]	0.835	0.943
Immunology	NK Cells	0.19 +/- 0.06 (n=10)	0.19 +/- 0.05 (n=10)	-0.00 [-0.06, 0.05]	0.967	0.967
Other	Body weight gain	67.98 +/- 16.86 (n=15)	74.57 +/- 19.73 (n=15)	-6.59 [-20.33, 7.15]	0.334	0.702

Table SR2 – Type IV conventional cage vs. RCC vehicle – Day 29

Domain	Parameter	Conventional cage vehicle	RCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Hematology	Neutrophils	1.20 +/- 0.32 (n=15)	0.85 +/- 0.24 (n=15)	0.35 [0.14, 0.57]	0.002	0.053
Hematology	Basophils	0.05 +/- 0.02 (n=15)	0.08 +/- 0.04 (n=15)	-0.03 [-0.05, -0.01]	0.011	0.109
Hematology	Lymphocytes	5.48 +/- 1.01 (n=15)	5.93 +/- 0.91 (n=15)	-0.44 [-1.16, 0.28]	0.218	0.614
Hematology	Eosinophils	0.13 +/- 0.04 (n=15)	0.12 +/- 0.03 (n=15)	0.01 [-0.02, 0.04]	0.611	0.848
Hematology	Platelets	817.93 +/- 97.12 (n=15)	829.87 +/- 59.50 (n=15)	-11.93 [-72.74, 48.87]	0.689	0.848
Hematology	Reticulocytes	186.45 +/- 31.49 (n=15)	180.73 +/- 30.16 (n=15)	5.72 [-17.34, 28.78]	0.615	0.848
Hematology	Haemoglobin	15.92 +/- 0.50 (n=15)	15.86 +/- 0.65 (n=15)	0.06 [-0.38, 0.50]	0.781	0.851
Hematology	White blood cells	7.04 +/- 1.09 (n=15)	7.16 +/- 0.96 (n=15)	-0.12 [-0.89, 0.65]	0.755	0.851
Hematology	Red blood cells	8.60 +/- 0.38 (n=15)	8.63 +/- 0.48 (n=15)	-0.03 [-0.36, 0.29]	0.829	0.885
Hematology	Monocytes	0.17 +/- 0.04 (n=15)	0.16 +/- 0.06 (n=15)	0.00 [-0.04, 0.04]	0.919	0.959
Hematology	Haematocrit	45.90 +/- 1.51 (n=15)	45.91 +/- 2.07 (n=15)	-0.01 [-1.37, 1.35]	0.992	0.992
Clinical chemistry	Inorganic phosphate	2.24 +/- 0.17 (n=15)	2.59 +/- 0.21 (n=15)	-0.35 [-0.49, -0.21]	<0.001	0.001
Clinical chemistry	Calcium	2.50 +/- 0.08 (n=15)	2.58 +/- 0.09 (n=15)	-0.08 [-0.15, -0.02]	0.009	0.109
Clinical chemistry	Potassium	4.38 +/- 0.27 (n=15)	4.69 +/- 0.31 (n=15)	-0.30 [-0.52, -0.09]	0.008	0.109
Clinical chemistry	Albumin	39.77 +/- 1.17 (n=15)	38.73 +/- 1.52 (n=15)	1.05 [0.03, 2.07]	0.045	0.223
Clinical chemistry	Sodium	145.66 +/- 1.07 (n=15)	144.98 +/- 0.81 (n=15)	0.68 [-0.03, 1.39]	0.061	0.264
Clinical chemistry	Total protein	61.39 +/- 2.08 (n=15)	59.70 +/- 2.84 (n=15)	1.69 [-0.17, 3.56]	0.074	0.295
Clinical chemistry	ALAT	35.80 +/- 4.84 (n=15)	33.20 +/- 4.20 (n=15)	2.60 [-0.79, 5.99]	0.128	0.408
Clinical chemistry	Chloride	103.09 +/- 1.73 (n=15)	102.19 +/- 1.66 (n=15)	0.89 [-0.37, 2.16]	0.159	0.478
Clinical chemistry	GLDH	6.10 +/- 0.70 (n=15)	6.43 +/- 0.89 (n=15)	-0.33 [-0.93, 0.27]	0.274	0.657
Clinical chemistry	Bilirubin	0.97 +/- 0.24 (n=15)	0.84 +/- 0.36 (n=15)	0.13 [-0.10, 0.36]	0.265	0.657
Clinical chemistry	ASAT	86.13 +/- 6.02 (n=15)	83.73 +/- 6.19 (n=15)	2.40 [-2.17, 6.97]	0.291	0.665
Clinical chemistry	Cholesterol	1.58 +/- 0.26 (n=15)	1.67 +/- 0.25 (n=15)	-0.09 [-0.28, 0.10]	0.345	0.691
Clinical chemistry	Urea	5.29 +/- 0.45 (n=15)	5.54 +/- 0.88 (n=15)	-0.25 [-0.78, 0.28]	0.343	0.691
Clinical chemistry	ALP	93.13 +/- 14.56 (n=15)	88.07 +/- 20.02 (n=15)	5.07 [-8.08, 18.22]	0.435	0.774
Clinical chemistry	Glucose	4.59 +/- 0.49 (n=15)	4.81 +/- 0.89 (n=15)	-0.21 [-0.76, 0.33]	0.425	0.774
Clinical chemistry	Creatinine	19.07 +/- 2.34 (n=15)	18.67 +/- 2.19 (n=15)	0.40 [-1.30, 2.10]	0.633	0.848
Clinical chemistry	Triglycerides	0.82 +/- 0.28 (n=15)	0.81 +/- 0.23 (n=15)	0.00 [-0.19, 0.20]	0.966	0.987
Organ weights	Seminal Vesicles	0.3338 +/- 0.1025 (n=10)	0.2066 +/- 0.1151 (n=10)	0.1272 [0.0247, 0.2297]	0.018	0.143
Organ weights	(Para)thyroids	0.0066 +/- 0.0011 (n=10)	0.0055 +/- 0.0009 (n=10)	0.0011 [0.0001, 0.0020]	0.029	0.196
Organ weights	Adrenals	0.0226 +/- 0.0025 (n=10)	0.0203 +/- 0.0024 (n=10)	0.0024 [0.0000, 0.0047]	0.046	0.223

Domain	Parameter	Conventional cage vehicle	RCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Organ weights	Prostate	0.2620 +/- 0.0402 (n=10)	0.2068 +/- 0.0691 (n=10)	0.0551 [0.0011, 0.1092]	0.046	0.223
Organ weights	Thymus	0.1405 +/- 0.0251 (n=10)	0.1676 +/- 0.0418 (n=10)	-0.0272 [-0.0601, 0.0057]	0.099	0.355
Organ weights	Spleen	0.1956 +/- 0.0211 (n=10)	0.2050 +/- 0.0200 (n=10)	-0.0094 [-0.0287, 0.0100]	0.323	0.691
Organ weights	Brain	0.7504 +/- 0.0585 (n=10)	0.7383 +/- 0.0664 (n=10)	0.0121 [-0.0468, 0.0709]	0.671	0.848
Organ weights	Epididymides	0.3876 +/- 0.0289 (n=10)	0.3776 +/- 0.0361 (n=10)	0.0100 [-0.0208, 0.0408]	0.503	0.848
Organ weights	Heart	0.3472 +/- 0.0258 (n=10)	0.3513 +/- 0.0175 (n=10)	-0.0041 [-0.0250, 0.0168]	0.682	0.848
Organ weights	Liver	2.9166 +/- 0.1386 (n=10)	2.9427 +/- 0.1274 (n=10)	-0.0261 [-0.1512, 0.0990]	0.666	0.848
Organ weights	Terminal BW	283.4000 +/- 22.3617 (n=10)	289.0000 +/- 21.1397 (n=10)	-5.6000 [-26.0488, 14.8488]	0.572	0.848
Organ weights	Kidneys	0.7205 +/- 0.0494 (n=10)	0.7147 +/- 0.0342 (n=10)	0.0057 [-0.0345, 0.0460]	0.767	0.851
Organ weights	Testes	1.1450 +/- 0.1033 (n=10)	1.1295 +/- 0.0840 (n=10)	0.0155 [-0.0732, 0.1042]	0.717	0.851
Immunology	B Cells	1.87 +/- 0.62 (n=10)	2.30 +/- 0.48 (n=10)	-0.43 [-0.95, 0.10]	0.103	0.355
Immunology	TC Cells	0.79 +/- 0.21 (n=10)	0.87 +/- 0.22 (n=10)	-0.08 [-0.28, 0.11]	0.382	0.734
Immunology	NK Cells	0.19 +/- 0.06 (n=10)	0.17 +/- 0.05 (n=10)	0.01 [-0.04, 0.07]	0.561	0.848
Immunology	T Cells	2.80 +/- 0.56 (n=10)	2.94 +/- 0.72 (n=10)	-0.15 [-0.75, 0.46]	0.612	0.848
Immunology	TH Cells	1.96 +/- 0.30 (n=10)	2.07 +/- 0.51 (n=10)	-0.11 [-0.51, 0.28]	0.552	0.848
Immunology	IgA	32266.95 +/- 7199.22 (n=10)	33535.10 +/- 8894.44 (n=10)	-1268.15 [-8894.19, 6357.89]	0.730	0.851
Other	Body weight gain	67.98 +/- 16.86 (n=15)	76.15 +/- 19.59 (n=15)	-8.17 [-21.86, 5.51]	0.231	0.616

Table SR3 – Type IV conventional cage vs. TRCC vehicle – Day 57

Domain	Parameter	Conventional cage vehicle	TRCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Hematology	Basophils	0.02 +/- 0.01 (n=5)	0.02 +/- 0.01 (n=5)	0.01 [-0.01, 0.03]	0.304	0.573
Hematology	Reticulocytes	175.30 +/- 25.99 (n=5)	192.02 +/- 16.70 (n=5)	-16.72 [-49.57, 16.13]	0.267	0.573
Hematology	Lymphocytes	3.74 +/- 0.73 (n=5)	3.34 +/- 0.67 (n=5)	0.40 [-0.62, 1.42]	0.394	0.630
Hematology	Haemoglobin	16.26 +/- 0.68 (n=5)	15.96 +/- 0.39 (n=5)	0.30 [-0.54, 1.14]	0.422	0.636
Hematology	White blood cells	4.97 +/- 0.69 (n=5)	4.63 +/- 0.93 (n=5)	0.34 [-0.87, 1.55]	0.530	0.771
Hematology	Monocytes	0.08 +/- 0.02 (n=5)	0.09 +/- 0.01 (n=5)	-0.00 [-0.03, 0.02]	0.702	0.822
Hematology	Neutrophils	1.01 +/- 0.22 (n=5)	1.09 +/- 0.36 (n=5)	-0.08 [-0.52, 0.37]	0.696	0.822
Hematology	Red blood cells	9.08 +/- 0.29 (n=5)	8.97 +/- 0.49 (n=5)	0.11 [-0.50, 0.72]	0.674	0.822
Hematology	Eosinophils	0.09 +/- 0.04 (n=5)	0.09 +/- 0.03 (n=5)	0.01 [-0.04, 0.06]	0.726	0.826
Hematology	Haematocrit	48.04 +/- 1.22 (n=5)	47.70 +/- 1.83 (n=5)	0.34 [-1.99, 2.67]	0.740	0.826
Hematology	Platelets	795.60 +/- 120.45 (n=5)	806.40 +/- 76.50 (n=5)	-10.80 [-162.72, 141.12]	0.871	0.908
Clinical chemistry	GLDH	6.48 +/- 0.82 (n=5)	11.52 +/- 3.58 (n=5)	-5.04 [-9.43, -0.65]	0.033	0.539
Clinical chemistry	Inorganic phosphate	1.92 +/- 0.24 (n=5)	2.24 +/- 0.12 (n=5)	-0.32 [-0.61, -0.03]	0.036	0.539
Clinical chemistry	Sodium	145.40 +/- 0.58 (n=5)	144.60 +/- 0.47 (n=5)	0.80 [0.02, 1.58]	0.046	0.539
Clinical chemistry	Urea	5.40 +/- 0.57 (n=5)	6.14 +/- 0.51 (n=5)	-0.74 [-1.53, 0.05]	0.062	0.539
Clinical chemistry	ALAT	37.40 +/- 2.61 (n=5)	42.00 +/- 8.57 (n=5)	-4.60 [-15.08, 5.88]	0.306	0.573
Clinical chemistry	Albumin	40.20 +/- 1.68 (n=5)	39.30 +/- 0.45 (n=5)	0.90 [-1.16, 2.96]	0.305	0.573
Clinical chemistry	ALP	70.80 +/- 11.92 (n=5)	92.20 +/- 21.81 (n=5)	-21.40 [-48.40, 5.60]	0.101	0.573
Clinical chemistry	Calcium	2.42 +/- 0.05 (n=5)	2.47 +/- 0.04 (n=5)	-0.06 [-0.12, 0.01]	0.096	0.573
Clinical chemistry	Chloride	104.14 +/- 0.86 (n=5)	104.82 +/- 0.80 (n=5)	-0.68 [-1.89, 0.53]	0.231	0.573
Clinical chemistry	Cholesterol	1.61 +/- 0.24 (n=5)	1.38 +/- 0.21 (n=5)	0.23 [-0.10, 0.56]	0.149	0.573
Clinical chemistry	Creatinine	26.20 +/- 3.11 (n=5)	24.20 +/- 2.28 (n=5)	2.00 [-2.04, 6.04]	0.283	0.573
Clinical chemistry	Glucose	4.72 +/- 0.84 (n=5)	5.28 +/- 0.62 (n=5)	-0.56 [-1.65, 0.53]	0.267	0.573
Clinical chemistry	Bilirubin	0.82 +/- 0.23 (n=5)	0.64 +/- 0.26 (n=5)	0.18 [-0.18, 0.54]	0.279	0.573
Clinical chemistry	Total protein	58.74 +/- 2.09 (n=5)	56.94 +/- 0.79 (n=5)	1.80 [-0.76, 4.36]	0.131	0.573
Clinical chemistry	Triglycerides	0.43 +/- 0.19 (n=5)	0.67 +/- 0.29 (n=5)	-0.23 [-0.60, 0.13]	0.169	0.573
Clinical chemistry	Potassium	4.63 +/- 0.35 (n=5)	4.77 +/- 0.41 (n=5)	-0.14 [-0.70, 0.42]	0.573	0.809
Clinical chemistry	ASAT	88.80 +/- 9.68 (n=5)	89.60 +/- 16.10 (n=5)	-0.80 [-20.94, 19.34]	0.927	0.927
Organ weights	Thymus	0.1218 +/- 0.0143 (n=5)	0.1049 +/- 0.0103 (n=5)	0.0169 [-0.0016, 0.0353]	0.067	0.539
Organ weights	Brain	0.6804 +/- 0.0534 (n=5)	0.6442 +/- 0.0504 (n=5)	0.0361 [-0.0396, 0.1119]	0.303	0.573
Organ weights	Heart	0.3323 +/- 0.0388 (n=5)	0.3118 +/- 0.0144 (n=5)	0.0204 [-0.0269, 0.0677]	0.319	0.573

Domain	Parameter	Conventional cage vehicle	TRCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Organ weights	Kidneys	0.7171 +/- 0.0533 (n=5)	0.6776 +/- 0.0473 (n=5)	0.0395 [-0.0342, 0.1132]	0.251	0.573
Organ weights	Spleen	0.1939 +/- 0.0223 (n=5)	0.1742 +/- 0.0131 (n=5)	0.0197 [-0.0081, 0.0475]	0.135	0.573
Organ weights	Terminal BW	318.6000 +/- 39.0167 (n=5)	341.4000 +/- 27.9786 (n=5)	-22.8000 [-73.2143, 27.6143]	0.322	0.573
Organ weights	Adrenals	0.0184 +/- 0.0025 (n=5)	0.0170 +/- 0.0019 (n=5)	0.0013 [-0.0020, 0.0047]	0.389	0.630
Organ weights	Epididymides	0.3632 +/- 0.0374 (n=5)	0.3739 +/- 0.0217 (n=5)	-0.0108 [-0.0573, 0.0358]	0.597	0.818
Organ weights	Liver	2.7969 +/- 0.2393 (n=5)	2.7402 +/- 0.1537 (n=5)	0.0567 [-0.2456, 0.3590]	0.670	0.822
Organ weights	Prostate	0.2204 +/- 0.0635 (n=5)	0.2382 +/- 0.0513 (n=5)	-0.0179 [-0.1027, 0.0670]	0.638	0.822
Organ weights	Seminal Vesicles	0.3599 +/- 0.1746 (n=5)	0.3821 +/- 0.0956 (n=5)	-0.0222 [-0.2384, 0.1940]	0.811	0.866
Organ weights	(Para)thyroids	0.0053 +/- 0.0011 (n=5)	0.0051 +/- 0.0014 (n=5)	0.0002 [-0.0016, 0.0020]	0.812	0.866
Organ weights	Testes	1.0341 +/- 0.0850 (n=5)	1.0416 +/- 0.1011 (n=5)	-0.0075 [-0.1444, 0.1294]	0.902	0.922
Immunology	IgA	27932.80 +/- 4227.35 (n=5)	37248.80 +/- 5572.42 (n=5)	-9316.00 [-16621.39, -2010.61]	0.019	0.539
Immunology	T Cells	2.20 +/- 0.67 (n=5)	1.64 +/- 0.33 (n=5)	0.56 [-0.26, 1.38]	0.146	0.573
Immunology	TH Cells	1.62 +/- 0.51 (n=5)	1.22 +/- 0.32 (n=5)	0.40 [-0.24, 1.04]	0.182	0.573
Immunology	TC Cells	0.53 +/- 0.19 (n=5)	0.43 +/- 0.15 (n=5)	0.10 [-0.15, 0.35]	0.383	0.630
Immunology	B Cells	1.31 +/- 0.31 (n=5)	1.55 +/- 0.53 (n=5)	-0.24 [-0.90, 0.43]	0.424	0.636
Immunology	NK Cells	0.17 +/- 0.06 (n=5)	0.16 +/- 0.04 (n=5)	0.01 [-0.06, 0.09]	0.686	0.822
Other	Body weight gain	100.16 +/- 25.72 (n=5)	122.62 +/- 25.47 (n=5)	-22.46 [-59.79, 14.87]	0.203	0.573

Table SR4 – Type IV conventional cage vs. RCC vehicle – Day 57

Domain	Parameter	Conventional cage vehicle	RCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Hematology	Haematocrit	48.04 +/- 1.22 (n=5)	46.50 +/- 1.64 (n=4)	1.54 [-0.92, 4.00]	0.173	0.571
Hematology	Red blood cells	9.08 +/- 0.29 (n=5)	8.62 +/- 0.44 (n=4)	0.46 [-0.20, 1.12]	0.134	0.571
Hematology	Eosinophils	0.09 +/- 0.04 (n=5)	0.07 +/- 0.03 (n=4)	0.02 [-0.04, 0.08]	0.419	0.693
Hematology	Monocytes	0.08 +/- 0.02 (n=5)	0.10 +/- 0.02 (n=4)	-0.01 [-0.04, 0.02]	0.348	0.693
Hematology	Neutrophils	1.01 +/- 0.22 (n=5)	0.83 +/- 0.30 (n=4)	0.18 [-0.28, 0.63]	0.366	0.693
Hematology	Reticulocytes	175.30 +/- 25.99 (n=5)	160.38 +/- 29.46 (n=4)	14.93 [-30.77, 60.62]	0.456	0.719
Hematology	Basophils	0.02 +/- 0.01 (n=5)	0.03 +/- 0.02 (n=4)	-0.00 [-0.03, 0.02]	0.728	0.888
Hematology	Haemoglobin	16.26 +/- 0.68 (n=5)	16.18 +/- 0.38 (n=4)	0.09 [-0.77, 0.94]	0.819	0.894
Hematology	Lymphocytes	3.74 +/- 0.73 (n=5)	3.87 +/- 0.59 (n=4)	-0.13 [-1.17, 0.91]	0.775	0.894
Hematology	Platelets	795.60 +/- 120.45 (n=5)	802.50 +/- 93.95 (n=4)	-6.90 [-175.90, 162.10]	0.926	0.945
Hematology	White blood cells	4.97 +/- 0.69 (n=5)	4.92 +/- 0.56 (n=4)	0.05 [-0.94, 1.03]	0.915	0.945
Clinical chemistry	ASAT	88.80 +/- 9.68 (n=5)	72.80 +/- 8.58 (n=5)	16.00 [2.62, 29.38]	0.025	0.332
Clinical chemistry	Inorganic phosphate	1.92 +/- 0.24 (n=5)	2.36 +/- 0.10 (n=5)	-0.44 [-0.73, -0.15]	0.010	0.332
Clinical chemistry	Sodium	145.40 +/- 0.58 (n=5)	144.48 +/- 0.36 (n=5)	0.92 [0.19, 1.65]	0.021	0.332
Clinical chemistry	Total protein	58.74 +/- 2.09 (n=5)	55.68 +/- 0.73 (n=5)	3.06 [0.50, 5.62]	0.028	0.332
Clinical chemistry	Cholesterol	1.61 +/- 0.24 (n=5)	1.28 +/- 0.18 (n=5)	0.32 [0.01, 0.64]	0.045	0.359
Clinical chemistry	Albumin	40.20 +/- 1.68 (n=5)	38.28 +/- 0.91 (n=5)	1.92 [-0.16, 4.00]	0.065	0.445
Clinical chemistry	ALAT	37.40 +/- 2.61 (n=5)	34.20 +/- 2.86 (n=5)	3.20 [-0.80, 7.20]	0.102	0.535
Clinical chemistry	Glucose	4.72 +/- 0.84 (n=5)	5.62 +/- 0.61 (n=5)	-0.90 [-1.99, 0.19]	0.092	0.535
Clinical chemistry	Chloride	104.14 +/- 0.86 (n=5)	104.86 +/- 0.56 (n=5)	-0.72 [-1.81, 0.37]	0.161	0.571
Clinical chemistry	ALP	70.80 +/- 11.92 (n=5)	81.40 +/- 12.66 (n=5)	-10.60 [-28.55, 7.35]	0.210	0.631
Clinical chemistry	Triglycerides	0.43 +/- 0.19 (n=5)	0.31 +/- 0.10 (n=5)	0.12 [-0.11, 0.35]	0.236	0.665
Clinical chemistry	Creatinine	26.20 +/- 3.11 (n=5)	24.20 +/- 2.49 (n=5)	2.00 [-2.15, 6.15]	0.296	0.693
Clinical chemistry	GLDH	6.48 +/- 0.82 (n=5)	8.48 +/- 3.57 (n=5)	-2.00 [-6.38, 2.38]	0.283	0.693
Clinical chemistry	Urea	5.40 +/- 0.57 (n=5)	4.98 +/- 0.70 (n=5)	0.42 [-0.52, 1.36]	0.331	0.693
Clinical chemistry	Potassium	4.63 +/- 0.35 (n=5)	4.77 +/- 0.20 (n=5)	-0.14 [-0.57, 0.30]	0.479	0.719
Clinical chemistry	Calcium	2.42 +/- 0.05 (n=5)	2.43 +/- 0.07 (n=5)	-0.01 [-0.11, 0.08]	0.737	0.888
Clinical chemistry	Bilirubin	0.82 +/- 0.23 (n=5)	0.86 +/- 0.22 (n=5)	-0.04 [-0.37, 0.29]	0.784	0.894
Organ weights	Brain	0.6804 +/- 0.0534 (n=5)	0.6362 +/- 0.0396 (n=5)	0.0442 [-0.0254, 0.1138]	0.178	0.571
Organ weights	Spleen	0.1939 +/- 0.0223 (n=5)	0.1753 +/- 0.0097 (n=5)	0.0186 [-0.0087, 0.0458]	0.143	0.571
Organ weights	Epididymides	0.3632 +/- 0.0374 (n=5)	0.3865 +/- 0.0456 (n=5)	-0.0233 [-0.0845, 0.0378]	0.402	0.693

Domain	Parameter	Conventional cage vehicle	RCC vehicle	Difference [95% CI]	p-value (raw)	p-value (BH)
Organ weights	Liver	2.7969 +/- 0.2393 (n=5)	2.6786 +/- 0.1402 (n=5)	0.1183 [-0.1801, 0.4166]	0.375	0.693
Organ weights	Terminal BW	318.6000 +/- 39.0167 (n=5)	337.2000 +/- 26.3382 (n=5)	-18.6000 [-68.3540, 31.1540]	0.406	0.693
Organ weights	Testes	1.0341 +/- 0.0850 (n=5)	1.0867 +/- 0.1003 (n=5)	-0.0525 [-0.1888, 0.0837]	0.398	0.693
Organ weights	Seminal Vesicles	0.3599 +/- 0.1746 (n=5)	0.4295 +/- 0.0996 (n=5)	-0.0695 [-0.2866, 0.1475]	0.467	0.719
Organ weights	Thymus	0.1218 +/- 0.0143 (n=5)	0.1146 +/- 0.0187 (n=5)	0.0072 [-0.0173, 0.0317]	0.513	0.747
Organ weights	Heart	0.3323 +/- 0.0388 (n=5)	0.3447 +/- 0.0199 (n=5)	-0.0125 [-0.0602, 0.0353]	0.546	0.770
Organ weights	(Para)thyroids	0.0053 +/- 0.0011 (n=5)	0.0050 +/- 0.0003 (n=5)	0.0003 [-0.0011, 0.0016]	0.604	0.829
Organ weights	Adrenals	0.0184 +/- 0.0025 (n=5)	0.0176 +/- 0.0029 (n=5)	0.0007 [-0.0033, 0.0047]	0.682	0.885
Organ weights	Prostate	0.2204 +/- 0.0635 (n=5)	0.2359 +/- 0.0437 (n=5)	-0.0155 [-0.0968, 0.0658]	0.666	0.885
Organ weights	Kidneys	0.7171 +/- 0.0533 (n=5)	0.7284 +/- 0.0507 (n=5)	-0.0113 [-0.0872, 0.0646]	0.740	0.888
Immunology	IgA	27932.80 +/- 4227.35 (n=5)	37855.00 +/- 7594.25 (n=5)	-9922.20 [-19337.76, -506.64]	0.042	0.359
Immunology	NK Cells	0.17 +/- 0.06 (n=5)	0.12 +/- 0.02 (n=4)	0.06 [-0.02, 0.13]	0.111	0.535
Immunology	B Cells	1.31 +/- 0.31 (n=5)	1.54 +/- 0.39 (n=4)	-0.22 [-0.82, 0.37]	0.389	0.693
Immunology	TC Cells	0.53 +/- 0.19 (n=5)	0.56 +/- 0.17 (n=4)	-0.03 [-0.31, 0.25]	0.805	0.894
Immunology	T Cells	2.20 +/- 0.67 (n=5)	2.16 +/- 0.39 (n=4)	0.04 [-0.82, 0.89]	0.918	0.945
Immunology	TH Cells	1.62 +/- 0.51 (n=5)	1.61 +/- 0.25 (n=4)	0.01 [-0.62, 0.64]	0.976	0.976
Other	Body weight gain	100.16 +/- 25.72 (n=5)	115.96 +/- 15.36 (n=5)	-15.80 [-47.95, 16.35]	0.279	0.693