

**Supplementary Information 3.** Results of Tukey's HSD tests analyzing differences in the amount of hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>), glutathione reduced (GSH), and catalytic activity of catalase (CAT), glutathione oxidase (GPx) and carboxyl esterase hydrolase (CEH), measured from tissue homogenates (fat body, cuticle and gut) and hemolymph of 3<sup>rd</sup> instars of the flesh fly *Sarcophaga dux* treated with 0 (Control), 25, 50 or 100 µg / mL epinephrine.

Dependent Variable		(I) F	(J) F	Mean Difference (I-J)	Std. Error	P	95% Confidence Interval	
							Lower Bound	Upper Bound
H2O2 <i>Fat body</i>	0	25		-.86486*	.11252	0.000	-1.2252-	-.5045-
		50		-1.65766*	.11252	0.000	-2.0180-	-1.2973-
		100		-1.73423*	.11252	0.000	-2.0946-	-1.3739-
	25	0		.86486*	.11252	0.000	.5045	1.2252
		50		-.79279*	.11252	0.000	-1.1531-	-.4325-
		100		-.86937*	.11252	0.000	-1.2297-	-.5090-
	50	0		1.65766*	.11252	0.000	1.2973	2.0180
		25		.79279*	.11252	0.000	.4325	1.1531
		100		-.07658	.11252	0.902	-.4369-	.2838
	100	0		1.73423*	.11252	0.000	1.3739	2.0946
		25		.86937*	.11252	0.000	.5090	1.2297
		50		.07658	.11252	0.902	-.2838-	.4369
H2O2 <i>Cuticule</i>	0	25		-4.79798-	2.09378	0.179	-11.5030-	1.9071
		50		-4.86364-	2.09378	0.172	-11.5687-	1.8414
		100		28.20202*	2.09378	0.000	21.4970	34.9071
	25	0		4.79798	2.09378	0.179	-1.9071-	11.5030
		50		-.06566-	2.09378	1.000	-6.7707-	6.6394
		100		33.00000*	2.09378	0.000	26.2950	39.7050
	50	0		4.86364	2.09378	0.172	-1.8414-	11.5687
		25		.06566	2.09378	1.000	-6.6394-	6.7707
		100		33.06566*	2.09378	0.000	26.3606	39.7707
	100	0		-28.20202*	2.09378	0.000	-34.9071-	-21.4970-
		25		-33.00000*	2.09378	0.000	-39.7050-	-26.2950-
		50		-33.06566*	2.09378	0.000	-39.7707-	-26.3606-
H2O2	0	25	-.26275-	.71114	0.982	-2.5401-	2.0146	

<i>Gut</i>	50	50	-26.74118 <sup>+</sup>	.71114	0.000	-29.0185-	-24.4639-
		100	-1.58431-	.71114	0.195	-3.8616-	.6930
	25	0	.26275	.71114	0.982	-2.0146-	2.5401
		50	-26.47843 <sup>+</sup>	.71114	0.000	-28.7558-	-24.2011-
		100	-1.32157-	.71114	0.316	-3.5989-	.9558
	50	0	26.74118 <sup>+</sup>	.71114	0.000	24.4639	29.0185
		25	26.47843 <sup>+</sup>	.71114	0.000	24.2011	28.7558
		100	25.15686 <sup>+</sup>	.71114	0.000	22.8795	27.4342
	100	0	1.58431	.71114	0.195	-.6930-	3.8616
25		1.32157	.71114	0.316	-.9558-	3.5989	
50		-25.15686 <sup>+</sup>	.71114	0.000	-27.4342-	-22.8795-	
<i>H2O2</i> <i>Hemolymph</i>	0	25	18.37538 <sup>+</sup>	1.07849	0.000	14.9217	21.8291
		50	.03003	1.07849	1.000	-3.4237-	3.4837
		100	18.26126 <sup>+</sup>	1.07849	0.000	14.8076	21.7150
	25	0	-18.37538 <sup>+</sup>	1.07849	0.000	-21.8291-	-14.9217-
		50	-18.34535 <sup>+</sup>	1.07849	0.000	-21.7990-	-14.8916-
		100	-.11411-	1.07849	1.000	-3.5678-	3.3396
	50	0	-.03003-	1.07849	1.000	-3.4837-	3.4237
		25	18.34535 <sup>+</sup>	1.07849	0.000	14.8916	21.7990
		100	18.23123 <sup>+</sup>	1.07849	0.000	14.7775	21.6849
	100	0	-18.26126 <sup>+</sup>	1.07849	0.000	-21.7150-	-14.8076-
		25	.11411	1.07849	1.000	-3.3396-	3.5678
		50	-18.23123 <sup>+</sup>	1.07849	0.000	-21.6849-	-14.7775-
<i>GSH</i> <i>Fat body</i>	0	25	3.14414 <sup>+</sup>	.40578	0.000	1.8447	4.4436
		50	3.04505 <sup>+</sup>	.40578	0.000	1.7456	4.3445
		100	5.06757 <sup>+</sup>	.40578	0.000	3.7681	6.3670
	25	0	-3.14414 <sup>+</sup>	.40578	0.000	-4.4436-	-1.8447-
		50	-.09910-	.40578	0.994	-1.3986-	1.2004
		100	1.92342 <sup>+</sup>	.40578	0.006	.6240	3.2229
	50	0	-3.04505 <sup>+</sup>	.40578	0.000	-4.3445-	-1.7456-
		25	.09910	.40578	0.994	-1.2004-	1.3986
		100	2.02252 <sup>+</sup>	.40578	0.005	.7231	3.3220
100	0	-5.06757 <sup>+</sup>	.40578	0.000	-6.3670-	-3.7681-	
	25	-1.92342 <sup>+</sup>	.40578	0.006	-3.2229-	-.6240-	

		50	-2.02252 <sup>*</sup>	.40578	0.005	-3.3220-	-.7231-
GSH	0	25	4.41919 <sup>*</sup>	.27130	0.000	3.5504	5.2880
<i>Cuticule</i>		50	-2.26263 <sup>*</sup>	.27130	0.000	-3.1314-	-1.3938-
		100	4.94444 <sup>*</sup>	.27130	0.000	4.0757	5.8132
	25	0	-4.41919 <sup>*</sup>	.27130	0.000	-5.2880-	-3.5504-
		50	-6.68182 <sup>*</sup>	.27130	0.000	-7.5506-	-5.8130-
		100	.52525	.27130	0.287	-.3435-	1.3940
	50	0	2.26263 <sup>*</sup>	.27130	0.000	1.3938	3.1314
		25	6.68182 <sup>*</sup>	.27130	0.000	5.8130	7.5506
		100	7.20707 <sup>*</sup>	.27130	0.000	6.3383	8.0759
	100	0	-4.94444 <sup>*</sup>	.27130	0.000	-5.8132-	-4.0757-
		25	-.52525-	.27130	0.287	-1.3940-	.3435
		50	-7.20707 <sup>*</sup>	.27130	0.000	-8.0759-	-6.3383-
GSH	0	25	.42353	.38837	0.705	-.8202-	1.6672
<i>Gut</i>		50	.36078	.38837	0.791	-.8829-	1.6045
		100	.36078	.38837	0.791	-.8829-	1.6045
	25	0	-.42353-	.38837	0.705	-1.6672-	.8202
		50	-.06275-	.38837	0.998	-1.3065-	1.1810
		100	-.06275-	.38837	0.998	-1.3065-	1.1810
	50	0	-.36078-	.38837	0.791	-1.6045-	.8829
		25	.06275	.38837	0.998	-1.1810-	1.3065
		100	.00000	.38837	1.000	-1.2437-	1.2437
	100	0	-.36078-	.38837	0.791	-1.6045-	.8829
		25	.06275	.38837	0.998	-1.1810-	1.3065
		50	.00000	.38837	1.000	-1.2437-	1.2437
GSH	0	25	1.03904	.42667	0.147	-.3273-	2.4054
<i>Hemolymph</i>		50	1.07207	.42667	0.132	-.2943-	2.4384
		100	-7.90991 <sup>*</sup>	.42667	0.000	-9.2763-	-6.5435-
	25	0	-1.03904-	.42667	0.147	-2.4054-	.3273
		50	.03303	.42667	1.000	-1.3333-	1.3994
		100	-8.94895 <sup>*</sup>	.42667	0.000	-10.3153-	-7.5826-
	50	0	-1.07207-	.42667	0.132	-2.4384-	.2943
		25	-.03303-	.42667	1.000	-1.3994-	1.3333
		100	-8.98198 <sup>*</sup>	.42667	0.000	-10.3483-	-7.6156-

	100	0	7.90991*	.42667	0.000	6.5435	9.2763
		25	8.94895*	.42667	0.000	7.5826	10.3153
		50	8.98198*	.42667	0.000	7.6156	10.3483
CAT	0	25	1.50450	8.17566	0.998	-24.6768-	27.6858
<i>Fat body</i>		50	-14.94595-	8.17566	0.328	-41.1273-	11.2354
		100	2.99099	8.17566	0.982	-23.1903-	29.1723
	25	0	-1.50450-	8.17566	0.998	-27.6858-	24.6768
		50	-16.45045-	8.17566	0.260	-42.6318-	9.7309
		100	1.48649	8.17566	0.998	-24.6949-	27.6678
	50	0	14.94595	8.17566	0.328	-11.2354-	41.1273
		25	16.45045	8.17566	0.260	-9.7309-	42.6318
		100	17.93694	8.17566	0.204	-8.2444-	44.1183
	100	0	-2.99099-	8.17566	0.982	-29.1723-	23.1903
		25	-1.48649-	8.17566	0.998	-27.6678-	24.6949
		50	-17.93694-	8.17566	0.204	-44.1183-	8.2444
CAT	0	25	-44.69697*	6.50532	0.001	-65.5293-	-23.8646-
<i>Cuticule</i>		50	-54.98990*	6.50532	0.000	-75.8222-	-34.1576-
		100	-53.23232*	6.50532	0.000	-74.0647-	-32.4000-
	25	0	44.69697*	6.50532	0.001	23.8646	65.5293
		50	-10.29293-	6.50532	0.439	-31.1253-	10.5394
		100	-8.53535-	6.50532	0.581	-29.3677-	12.2970
	50	0	54.98990*	6.50532	0.000	34.1576	75.8222
		25	10.29293	6.50532	0.439	-10.5394-	31.1253
		100	1.75758	6.50532	0.993	-19.0748-	22.5899
	100	0	53.23232*	6.50532	0.000	32.4000	74.0647
		25	8.53535	6.50532	0.581	-12.2970-	29.3677
		50	-1.75758-	6.50532	0.993	-22.5899-	19.0748
CAT	0	25	.07843	3.44701	1.000	-10.9601-	11.1170
<i>Gut</i>		50	-38.06275*	3.44701	0.000	-49.1013-	-27.0242-
		100	-40.47059*	3.44701	0.000	-51.5091-	-29.4321-
	25	0	-.07843-	3.44701	1.000	-11.1170-	10.9601
		50	-38.14118*	3.44701	0.000	-49.1797-	-27.1026-
		100	-40.54902*	3.44701	0.000	-51.5876-	-29.5105-
	50	0	38.06275*	3.44701	0.000	27.0242	49.1013

		25	38.14118*	3.44701	0.000	27.1026	49.1797
		100	-2.40784-	3.44701	0.895	-13.4464-	8.6307
	100	0	40.47059*	3.44701	0.000	29.4321	51.5091
		25	40.54902*	3.44701	0.000	29.5105	51.5876
		50	2.40784	3.44701	0.895	-8.6307-	13.4464
CAT	0	25	-9.89189-	5.47736	0.337	-27.4323-	7.6486
<i>Hemolymph</i>		50	-9.60961-	5.47736	0.359	-27.1501-	7.9308
		100	-9.72973-	5.47736	0.350	-27.2702-	7.8107
	25	0	9.89189	5.47736	0.337	-7.6486-	27.4323
		50	.28228	5.47736	1.000	-17.2582-	17.8227
		100	.16216	5.47736	1.000	-17.3783-	17.7026
	50	0	9.60961	5.47736	0.359	-7.9308-	27.1501
		25	-.28228-	5.47736	1.000	-17.8227-	17.2582
		100	-.12012-	5.47736	1.000	-17.6606-	17.4203
	100	0	9.72973	5.47736	0.350	-7.8107-	27.2702
		25	-.16216-	5.47736	1.000	-17.7026-	17.3783
		50	.12012	5.47736	1.000	-17.4203-	17.6606
GPx	0	25	-.27477-	.31250	0.816	-1.2755-	.7260
<i>Fat body</i>		50	4.34234*	.31250	0.000	3.3416	5.3431
		100	4.31532*	.31250	0.000	3.3146	5.3161
	25	0	.27477	.31250	0.816	-.7260-	1.2755
		50	4.61712*	.31250	0.000	3.6164	5.6179
		100	4.59009*	.31250	0.000	3.5893	5.5908
	50	0	-4.34234*	.31250	0.000	-5.3431-	-3.3416-
		25	-4.61712*	.31250	.000	-5.6179-	-3.6164-
		100	-.02703-	.31250	1.000	-1.0278-	.9737
	100	0	-4.31532*	.31250	0.000	-5.3161-	-3.3146-
		25	-4.59009*	.31250	0.000	-5.5908-	-3.5893-
		50	.02703	.31250	1.000	-.9737-	1.0278
GPx	0	25	10.29798*	.27911	0.000	9.4042	11.1918
<i>Cuticule</i>		50	11.13636*	.27911	0.000	10.2426	12.0302
		100	5.06061*	.27911	0.000	4.1668	5.9544
	25	0	-10.29798*	.27911	0.000	-11.1918-	-9.4042-
		50	.83838	.27911	0.066	-.0554-	1.7322

		100	-5.23737 <sup>+</sup>	.27911	0.000	-6.1312-	-4.3436-
	50	0	-11.13636 <sup>+</sup>	.27911	0.000	-12.0302-	-10.2426-
		25	-.83838-	.27911	0.066	-1.7322-	.0554
		100	-6.07576 <sup>+</sup>	.27911	0.000	-6.9696-	-5.1820-
	100	0	-5.06061 <sup>+</sup>	.27911	0.000	-5.9544-	-4.1668-
		25	5.23737 <sup>+</sup>	.27911	0.000	4.3436	6.1312
		50	6.07576 <sup>+</sup>	.27911	0.000	5.1820	6.9696
GPx	0	25	1.12941 <sup>+</sup>	.26683	0.012	.2749	1.9839
<i>Gut</i>		50	1.32941 <sup>+</sup>	.26683	0.005	.4749	2.1839
		100	-3.99608 <sup>+</sup>	.26683	0.000	-4.8505-	-3.1416-
	25	0	-1.12941 <sup>+</sup>	.26683	0.012	-1.9839-	-.2749-
		50	.20000	.26683	0.874	-.6545-	1.0545
		100	-5.12549 <sup>+</sup>	.26683	0.000	-5.9800-	-4.2710-
	50	0	-1.32941 <sup>+</sup>	.26683	0.005	-2.1839-	-.4749-
		25	-.20000-	.26683	0.874	-1.0545-	.6545
		100	-5.32549 <sup>+</sup>	.26683	0.000	-6.1800-	-4.4710-
	100	0	3.99608 <sup>+</sup>	.26683	0.000	3.1416	4.8505
		25	5.12549 <sup>+</sup>	.26683	0.000	4.2710	5.9800
		50	5.32549 <sup>+</sup>	.26683	0.000	4.4710	6.1800
GPx	0	25	2.38138 <sup>+</sup>	.35426	0.001	1.2469	3.5158
<i>Hemolymph</i>		50	-1.67267 <sup>+</sup>	.35426	0.007	-2.8071-	-.5382-
		100	-1.95495 <sup>+</sup>	.35426	0.002	-3.0894-	-.8205-
	25	0	-2.38138 <sup>+</sup>	.35426	0.001	-3.5158-	-1.2469-
		50	-4.05405 <sup>+</sup>	.35426	0.000	-5.1885-	-2.9196-
		100	-4.33634 <sup>+</sup>	.35426	0.000	-5.4708-	-3.2019-
	50	0	1.67267 <sup>+</sup>	.35426	0.007	.5382	2.8071
		25	4.05405 <sup>+</sup>	.35426	0.000	2.9196	5.1885
		100	-.28228-	.35426	0.854	-1.4167-	.8522
	100	0	1.95495 <sup>+</sup>	.35426	0.002	.8205	3.0894
		25	4.33634 <sup>+</sup>	.35426	0.000	3.2019	5.4708
		50	.28228	.35426	0.854	-.8522-	1.4167
CEH	0	25	-.11712-	.23339	0.956	-.8645-	.6303
<i>Fat body</i>		50	2.43243 <sup>+</sup>	.23339	0.000	1.6850	3.1798
		100	2.88739 <sup>+</sup>	.23339	0.000	2.1400	3.6348

	25	0	.11712	.23339	0.956	-.6303-	.8645
		50	2.54955 <sup>+</sup>	.23339	0.000	1.8022	3.2969
		100	3.00450 <sup>+</sup>	.23339	0.000	2.2571	3.7519
	50	0	-2.43243 <sup>+</sup>	.23339	0.000	-3.1798-	-1.6850-
		25	-2.54955 <sup>+</sup>	.23339	0.000	-3.2969-	-1.8022-
		100	.45495	.23339	0.282	-.2924-	1.2023
	100	0	-2.88739 <sup>+</sup>	.23339	0.000	-3.6348-	-2.1400-
		25	-3.00450 <sup>+</sup>	.23339	0.000	-3.7519-	-2.2571-
		50	-.45495-	.23339	0.282	-1.2023-	.2924
CEH	0	25	3.28788 <sup>+</sup>	.68616	0.006	1.0905	5.4852
<i>Cuticule</i>		50	2.82323 <sup>+</sup>	.68616	0.014	.6259	5.0206
		100	4.47475 <sup>+</sup>	.68616	0.001	2.2774	6.6721
	25	0	-3.28788 <sup>+</sup>	.68616	0.006	-5.4852-	-1.0905-
		50	-.46465-	.68616	0.903	-2.6620-	1.7327
		100	1.18687	.68616	0.370	-1.0105-	3.3842
	50	0	-2.82323 <sup>+</sup>	.68616	0.014	-5.0206-	-.6259-
		25	.46465	.68616	0.903	-1.7327-	2.6620
		100	1.65152	.68616	0.153	-.5458-	3.8488
	100	0	-4.47475 <sup>+</sup>	.68616	0.001	-6.6721-	-2.2774-
		25	-1.18687-	.68616	0.370	-3.3842-	1.0105
		50	-1.65152-	.68616	0.153	-3.8488-	.5458
CEH	0	25	1.38824 <sup>+</sup>	.25100	0.002	.5845	2.1920
<i>Gut</i>		50	.90588 <sup>+</sup>	.25100	0.028	.1021	1.7097
		100	2.85490 <sup>+</sup>	.25100	0.000	2.0511	3.6587
	25	0	-1.38824 <sup>+</sup>	.25100	0.002	-2.1920-	-.5845-
		50	-.48235-	.25100	0.292	-1.2861-	.3214
		100	1.46667 <sup>+</sup>	.25100	0.002	.6629	2.2704
	50	0	-.90588 <sup>+</sup>	.25100	0.028	-1.7097-	-.1021-
		25	.48235	.25100	0.292	-.3214-	1.2861
		100	1.94902 <sup>+</sup>	.25100	0.000	1.1452	2.7528
	100	0	-2.85490 <sup>+</sup>	.25100	0.000	-3.6587-	-2.0511-
		25	-1.46667 <sup>+</sup>	.25100	0.002	-2.2704-	-.6629-
		50	-1.94902 <sup>+</sup>	.25100	0.000	-2.7528-	-1.1452-
CEH	0	25	.95796 <sup>+</sup>	.11186	0.000	.5997	1.3162

<i>Hemolymph</i>	50	1.36336*	.11186	0.000	1.0052	1.7216
	100	1.30931*	.11186	0.000	.9511	1.6675
25	0	-.95796*	.11186	0.000	-1.3162-	-.5997-
	50	.40541*	.11186	0.028	.0472	.7636
	100	.35135	.11186	0.055	-.0069-	.7096
50	0	-1.36336*	.11186	0.000	-1.7216-	-1.0052-
	25	-.40541*	.11186	0.028	-.7636-	-.0472-
	100	-.05405-	.11186	0.961	-.4123-	.3042
100	0	-1.30931*	.11186	0.000	-1.6675-	-.9511-
	25	-.35135-	.11186	0.055	-.7096-	.0069
	50	.05405	.11186	0.961	-.3042-	.4123

\*. The mean difference is significant at the 0.05 level.