

Supplementary Table ST2. Results of lifespan trials of *D. melanogaster* adult males and females

Trial	Genotype	Diet	Treatment	Female							Male								
				N(0)	Median lifespan		Mean lifespan		Log-rank Test		N(0)	Median lifespan		Mean lifespan		Log-rank Test			
					days	% change†	days	s.e.	χ^2	prob		days	% change†	days	s.e.	χ^2	prob		
1	Canton-S	15% SY	control	189	35		34.5	0.83			189	52		47.4	0.51				
			10μM Resv	203	45	28.6	43.2	0.73	53.8	<0.0001	182	56	7.7	53.9	0.11	17.8	<0.0001		
			100μM Resv	189	41	17.1	41.8	0.75	34.2	<0.0001	188	53	1.9	50.8	0.9	0.8	0.383		
			200μM Resv	189	36	2.9	36.6	0.65	0.14	0.71	198	49	-5.8	47.9	0.95	0.0	0.838		
		5% SY	control	198	66		63.6	0.93			180	67		67.9	0.93				
			10μM Resv	203	63	-4.5	60	0.9	11.2	0.0008	180	66	-1.5	63.8	1.1	7.0	0.0081		
			100μM Resv	194	60	-9.1	60.8	0.87	8.7	0.0032	179	70	4.5	70.2	0.95	3.2	0.07		
			200μM Resv	202	66	0.0	63.9	0.99	0.99	0.32	174	70	4.5	69.1	1.2	5.4	0.02		
			2	3% CSY	control	80	29		30.5	1.2			113	38		40.1	1.1		
					10μM Resv	93	32	10.3	34.6	1.1	5.5	0.019	98	40	5.3	44	1.2	3.8	0.053
100μM Resv	100	36			24.1	38	1.3	19.7	<0.0001	118	49	28.9	47.5	1.2	16.4	<0.0001			
2% CSY	control	106		36		37.9	1.3			118	41		42.7	1.2					
	10μM Resv	103		36	0.0	38.6	1.1	0.65	0.42	102	43	4.9	43.6	1.3	1.3	0.26			
	100μM Resv	127		37	2.8	38.4	1.2	0.003	0.95	100	51	24.4	48.4	1.6	21.7	<0.0001			
3	yw	3% CSY		control	237	43		45.3	0.8			210	55		53.5	1.2			
				10μM Resv	223	47	9.3	46.5	0.78	0.16	0.69	218	65	18.2	57.9	1.3	14.0	0.0002	
				100μM Resv	274	51	18.6	50.7	0.81	28.7	<0.0001	308	64	16.4	62	0.97	38.7	<0.0001	
				10μM Fisetin	305	43	0.0	42.9	0.81	1.85	0.17	284	50	-9.1	52.2	1	0.0	0.958	
		100μM Fisetin	288	53	23.3	48.6	0.76	10.3	0.0013	285	67	21.8	60.4	0.94	17.2	<0.0001			
		2% CSY	control	311	47		47.4	0.82			281	58		57.6	0.98				
			10μM Resv	456	53	12.8	49.7	0.66	2.45	0.118	284	55	-5.2	55.2	1	1.6	0.21		
			100μM Resv	300	43	-8.5	43.2	0.74	21.5	<0.0001	290	48	-17.2	50.1	0.88	42.8	<0.0001		
	10μM Fisetin		307	45	-4.3	47	0.82	0.11	0.737	274	54	-6.9	54.1	0.99	7.8	0.0052			
	100μM Fisetin	300	46	-2.1	45.9	0.8	3.98	0.046	290	52	-10.3	51.6	1	17.1	<0.0001				
4	SIR2 loss of function <i>dSir2</i> [4.5]/ <i>dSir2</i> [5.26]	15% SY	control	175	58		53.5	1.2			168	64		61.7	1.1				
			100μM Resv	196	54	-6.9	51.5	1	16.9	<0.0001	166	61	-4.7	57.3	0.94	24.5	<0.0001		
5	SIR2 hypomorphism <i>dSir2</i> [17]/KG00871	15% SY	control	185	55		51.7	0.84			168	38		39.4	0.72				
			100μM Resv	183	54	-1.8	51.7	0.86	0.29	0.59	177	40	5.3	40.6	0.78	1.6	0.21		
6	SIR2 hypomorphism KG00871/KG00871	15% SY	control	184	50		47	1.1			167	53		50.1	1.2				
			10μM Resv	184	52	4.0	49.1	1.2	10.9	0.0009	152	59	11.3	55.9	1.1	8.4	0.0037		
			100μM Resv	173	52	4.0	50.2	1	6.98	0.0083	163	59	11.3	56.4	1	10.8	0.001		
			200μM Resv	141	48	-4.0	43.3	1.6	7.23	0.027	139	54	1.9	50.8	1.5	2.4	0.125		
7	SIR2 hypomorphism KG00871/Canton-S	15% SY	control	194	62		59.2	1.3			172	68		67.2	0.85				
			10μM Resv	199	72	16.1	67.7	1.1	26.1	<0.0001	185	74	8.8	69	1.2	7.9	0.005		
			100μM Resv	195	63	1.6	59.3	1.5	1.62	0.202	171	69	1.5	64.8	1.3	0.4	0.507		
			200μM Resv	186	73	17.7	67	1.2	22.1	<0.0001	176	73	7.4	71.1	0.94	14.3	0.0002		

† percent change is relative to control

Bold: increase in lifespan at significance criterion: $p < 0.01$ *Italics: decrease in lifespan* at significance criterion: $p < 0.01$

SY: sugar-yeast diet CSY: cornmeal-sugar-yeast diet