

Supplementary Table S4:

Summary of lifespan experiments. Median lifespan is calculated from the GraphPad Prism Software while Maximum lifespan was calculated by the mean lifespan of the oldest 10% cohort in each experiment. P-values are calculated from Log-Rank Tests for the entire population for the complete lifespan.

Trial 1 (Fig 1D)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	78	13.5	17.94		
<i>Mir-80(nDf53)</i>	81	14	21.22	p<0.01	18.2

Trial 2 (Fig 1D)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	99	16	23.48		
<i>mir-80(nDf53)</i>	100	16.5	25.23	p<0.05	7.5

Trial 3 (Fig 1D)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	98	16.5	23.87		
<i>mir-80(nDf53)</i>	99	17.0	25.05	p=0.5398	4.9

Trial 4 (Fig 1D)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	99	16.0	23.66		
<i>mir-80(nDf53)</i>	104	18.0	26.45	p=0.1357	11.79
<i>mir-80(nDf53);Ex[Pmir-80:mir-80]</i>	37	13.0	24.5	p=0.40	3.5

Trial 5 (Fig 1D)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	60	14	26.27		
<i>mir-80(nDf53)</i>	40	16.5	27.76	p<0.01	5.6
<i>mir-80(nDf53);Ex[Pmir-80]</i>	25	15	21.76	p=0.65	-17.1

Trial 6 (Fig 1D)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	40	14.5	24.56		
<i>mir-80(nDf53)</i>	50	17	33.1	p<0.01	34.7
<i>mir-80(nDf53);Ex[Pmir-80]</i>	29	13.00	23.8	p<0.05	-3.09

Trial 1 (Fig 4c)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	58	19	29.36		
<i>mir-80(nDf53)</i>	60	21	28.83		-8.00
<i>daf-16(mgDf50)</i>	61	13.00	20.6	p<0.05	-29.83
<i>mir-80(nDf53);daf-16(mgDf50)</i>	57	14	20.44	p<0.05	-30.38

Trial 2 (Fig 4c)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2	% change against N2
N2	63	17	26.82		
<i>mir-80(nDf53)</i>	60	21	34.25	p<0.01	27.7
<i>daf-16(mgDf50)</i>	59	14	22.44	p<0.05	-16.38
<i>mir-80(nDf53);daf-16(mgDf50)</i>	60	16	24.15	p<0.05	-10.02

Trial 1 (Fig 4d)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2 (L4440)	% change against N2 (L4440)
N2;L4440	93	14	29.94		
<i>mir-80(nDf53);L4440</i>	83	17	31.61	p<0.01	5.5
<i>N2(daf-2 RNAi)</i>	80	18	38.56	p<0.01	28.79
<i>mir-</i>	79	17	36.97	p<0.01	23.4

80(<i>nDf53</i> ; <i>daf-2 RNAi</i>)					
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Trial 2 (Fig 4d)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2 (L4440)	% change against N2 (L4440)
N2;L4440	50	18	34.1		
<i>mir-80(nDf53)</i> ;L4440	30	20	39.8	p<0.01	16.7
N2(<i>daf-2 RNAi</i>)	48	27	44.05	p<0.01	29.1
<i>mir-80(nDf53;daf-2 RNAi)</i>	42	27	36.5	p<0.01	7.0

Trial 3 (Fig 4d)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2 (L4440)	% change against N2 (L4440)
N2;L4440	50	18	26.57		
<i>mir-80(nDf53)</i> ;L4440	31	18	34.75	p<0.01	30.7
N2(<i>daf-2 RNAi</i>)	50	22	40.67	p<0.01	53.06
<i>mir-80(nDf53;daf-2 RNAi)</i>	41	24	42.09	p<0.01	58.4

Trial 1 (Fig 6c)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2 (L4440)	% change against N2 (L4440)
N2;L4440	50	18	26.57		
<i>mir-80(nDf53)</i> ;L4440	31	18	34.75	p<0.01	30.7
N2(<i>cbp-1 RNAi</i>)	42	16	20.12	p<0.01	-24.27
<i>mir-80(nDf53;cbp-1 RNAi)</i>	40	16	20.54	p<0.01	-22.69

Trial 2 (Fig 6c)	Number of	Median	Maximal	p-value	%
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	animals	Lifespan (days)	Lifespan (days)	against N2 (L4440)	change against N2 (L4440)
<i>N2(cbp-1 RNAi)</i>	40	18	18.87	NA	NA
<i>mir-80(nDf53);cbp-1 RNAi</i>	39	18	19.09	NA	NA

NA = Wildtype and *mir-80*(Δ) not performed for this trial.

Trial 3 (Fig 6c)	Number of animals	Median Lifespan (days)	Maximal Lifespan (days)	p-value against N2 (L4440)	% change against N2 (L4440)
<i>N2(cbp-1 RNAi)</i>	60	13	19.8	NA	NA
<i>mir-80(nDf53);cbp-1 RNAi</i>	60	15	20.13	NA	NA

NA = Wildtype and *mir-80*(Δ) not performed for this trial.

Individual Trials for Age pigment accumulation at Day 4 for Figs 4a, 5a, and 6a.
Fig 4,5,6a

	Trial 1	Trial 2	Trial 3	Mean	SEM	T-test
WT	346	347	348	347	0.57	
<i>mir-80</i>(Δ)	344	340	342	342	1.15	p<0.05 (vs WT)
<i>daf-16(mgDf50)</i>	347	349	349	348.33	0.67	NS (vs WT)
<i>mir-80</i>(Δ); <i>daf-16(mgDf50)</i>	344	350	347	347	1.73	NS (vs WT)
WT (Empty vector)	345	346	348	346.3	0.88	
<i>mir-80</i>(Δ) (Empty Vector)	342	342	340	341.67	0.67	p<0.001 (against wt EV)
<i>mir-80</i>(Δ) (<i>hsf-1 RNAi</i>)	347	346	344	345.67	0.88	p=0.055 (against <i>mir-80</i> (Δ) EV)
<i>mir-80</i>(Δ) (<i>cbp-1 RNAi</i>)	346	342	350	346	2.3	p<0.05 (against <i>mir-80</i> (Δ) EV)

Individual Trials for Age pigment accumulation at Day 4 for Figs 4b, 5b, and 6b.
Fig 4,5,6b

	Trial 1	Trial 2	Trial 3	Mean	SEM	T-test
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WT	0.50	0.48	0.57	0.51	0.02	
<i>mir-80(Δ)</i>	0.30	0.36	0.30	0.32	0.02	p<0.05 (vs WT)
<i>daf-16(mgDf50)</i>	1.03	1.15	1.59	1.25	0.16	p<0.01 (vs WT)
<i>mir-80(Δ); daf-16(mgDf50)</i>	0.99	1.23	1.51	1.24	0.14	p<0.01 (vs WT)
WT (Empty vector)	1.01	0.75	0.799	0.85	0.08	
<i>mir-80(Δ)</i> (Empty Vector)	0.36	0.74	0.36	0.49	0.12	p<0.001 (against wt EV)
<i>mir-80(Δ)</i> (<i>hsf-1 RNAi</i>)	0.67	0.494	0.789	0.65	0.08	p<0.05 (against <i>mir-80(Δ)</i> EV)
<i>mir-80(Δ)</i> (<i>cbp-1 RNAi</i>)	0.54	0.49	0.79	0.60	0.09	p<0.05 (against <i>mir-80(Δ)</i> EV)