

**Table S2 Comparison of MEME-identified motifs between *D. melanogaster* and *D. virilis***

Motif	Position <sup>1</sup>	Length (nt)	Identity (%)	E-value
1.1 <sup>2</sup>	256444	80	78.75	1.3e-140
1.4	256736	58	74.14	2.4e-069
1.3	257840	76	73.68	6.5e-107
1.2	257944	69	73.91	2.3e-120
2.3	259291	44	95.45	3.3e-107
2.1	261247	111	70.54	7.2e-222
2.4	261433	40	97.56	6.8e-103
2.5	262084	79	48.10	8.2e-107

<sup>1</sup>Indicates position of the first nucleotide in *D. melanogaster* genome (dm3, chrX)

<sup>2</sup>Encompasses *yar* promoter with two transcription start sites