

Table S4. Mosquito median survival time (MST) following fungal exposure. For each experiment, we report the predicted MST in days ( $\pm$  95% confidence interval, CI) for each temperature ('Temp.') and application rate (AR) combination. We did not predict MST for treatments in which more than 50% of mosquitoes survived to the end of the experiment (indicated by 'na'). In the *An. stephensi* experiment, experimental group is indicated in parentheses. In the blood feeding experiment, the MSTs from two separate analyses are presented. In the first (a), only the blood-fed groups were evaluated ('Blood'). In the second (b), the 26 °C blood-fed treatment was evaluated relative to the 26 °C non-blood-fed treatment ('No blood'). In the fluctuating temperature experiment, DTR indicates diurnal temperature range.

Experiment	Treatment	Temp.	MST ( $\pm$ 95% CI)		
			Control	High AR	Low AR
<i>An. stephensi</i>		10 (2)	na*	13.41 $\pm$ 0.35	16.59 $\pm$ 0.92
		14 (2)	na*	8.78 $\pm$ 0.58	11.84 $\pm$ 0.23
		18 (2)	na*	6.46 $\pm$ 0.15	8.77 $\pm$ 0.23
		20 (1)	na	5.82 $\pm$ 0.41	7.46 $\pm$ 0.68
		22 (1)	na	5.07 $\pm$ 0.18	7.68 $\pm$ 1.21
		24 (1)	na	4.51 $\pm$ 0.30	6.35 $\pm$ 0.26
		26 (1)	na	4.57 $\pm$ 0.23	5.86 $\pm$ 0.19
		26 (2)	na*	3.98 $\pm$ 0.15	5.79 $\pm$ 0.89
		28 (1)	na*	4.26 $\pm$ 0.26	5.56 $\pm$ 0.15
		30 (1)	17.20 $\pm$ 0.40	4.53 $\pm$ 0.40	6.13 $\pm$ 0.29
		32 (2)	18.01 $\pm$ 0.48	5.22 $\pm$ 0.48	7.35 $\pm$ 0.51
		34 (1)	16.49 $\pm$ 0.09	7.92 $\pm$ 0.09	9.57 $\pm$ 1.38
	<i>An. gambiae</i>		20	15.15 $\pm$ 0.19	5.17 $\pm$ 0.19
		26	11.85 $\pm$ 0.08	3.82 $\pm$ 0.08	4.82 $\pm$ 0.31
		32	8.49 $\pm$ 0.15	4.21 $\pm$ 0.15	5.10 $\pm$ 0.27
Blood feeding (a)	Blood	10	6.18 $\pm$ 0.63	5.95 $\pm$ 0.63	6.62 $\pm$ 0.59
		14	11.09 $\pm$ 0.34	6.74 $\pm$ 0.34	8.92 $\pm$ 1.26
		18	23.03 $\pm$ 0.16	5.50 $\pm$ 0.16	7.18 $\pm$ 1.12
		22	29.00 $\pm$ 0.23	4.59 $\pm$ 0.23	5.94 $\pm$ 0.35
		26	24.06 $\pm$ 0.21	4.16 $\pm$ 0.21	5.09 $\pm$ 0.55
		30	13.02 $\pm$ 0.29	4.47 $\pm$ 0.29	5.54 $\pm$ 0.49
		32	15.40 $\pm$ 0.42	5.01 $\pm$ 0.42	7.01 $\pm$ 0.29
Blood feeding (b)	No blood	26	na	4.72 $\pm$ 0.15	5.95 $\pm$ 0.30
	Blood	26	25.55 $\pm$ 0.20	4.08 $\pm$ 0.20	5.22 $\pm$ 0.29
Fluctuating temperatures	DTR=0	20	na	5.82 $\pm$ 0.17**	8.97 $\pm$ 0.65
		26	na	4.39 $\pm$ 0.15	6.58 $\pm$ 0.41
		32	na	5.32 $\pm$ 0.21	7.59 $\pm$ 0.37
	DTR=12	20	na	6.38 $\pm$ 0.40	8.67 $\pm$ 0.37
		26	na	5.22 $\pm$ 0.27	6.80 $\pm$ 0.30
		32	na	6.16 $\pm$ 0.42	7.49 $\pm$ 0.50

\*Replicate cups were removed from the analysis due to fungal contamination (N=2 cups for 10 and 26 °C group 2; N=3 cups for 14, 18 and 28 °C; N=4 cups for other treatments)

\*\*There were N=3 cups in this treatment; N=4 for other treatments in experiment