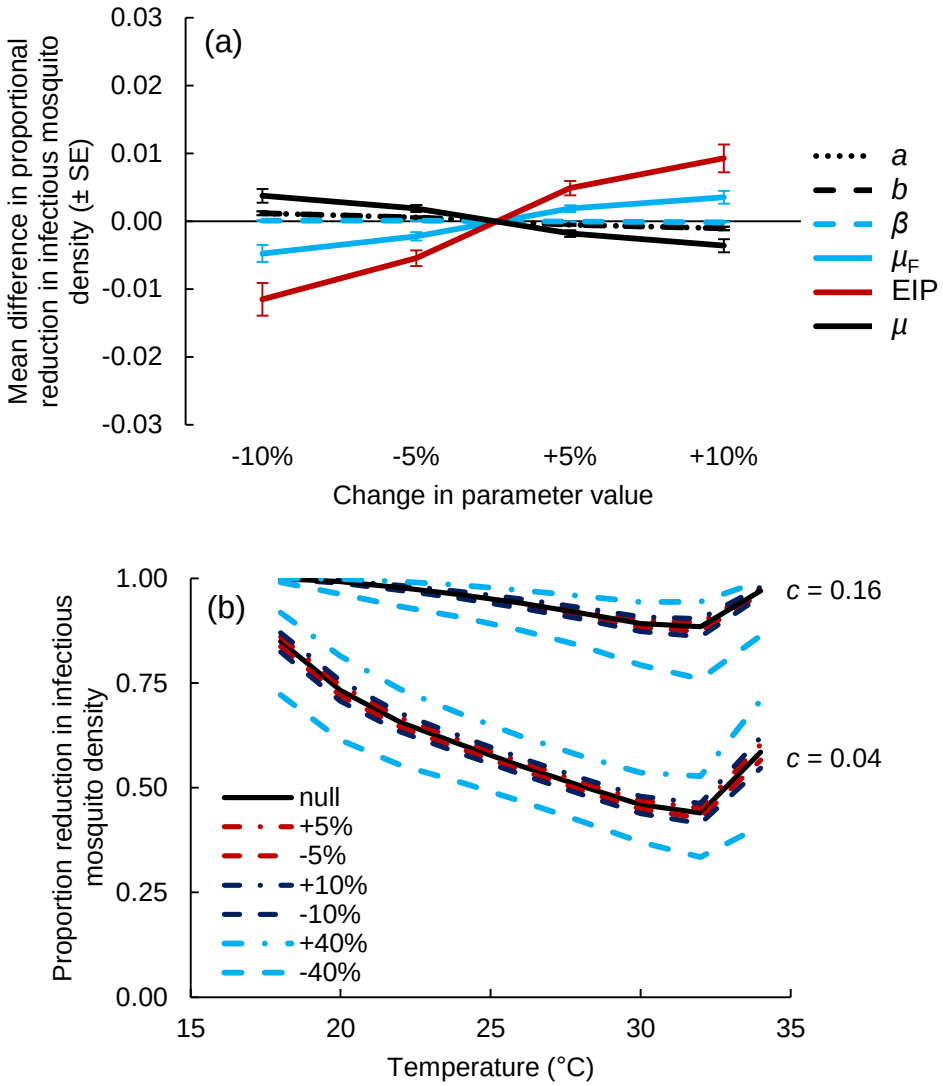

Fig. S4. Sensitivity analyses. (a) Impact of parameter perturbation on predicted infectious mosquito density. Each parameter (indicated by line colour/type) was reduced or increased by 5% or 10% (change in parameter value). We then re-evaluated the model using the revised estimates at 2 °C intervals from 18–34 °C assuming a high fungal application rate (AR) and a daily probability of fungal infection ('*c*') equal to 0.16. Lines represent the mean (± standard error) change in proportional reduction in infectious mosquito density relative to the reduction calculated using the original parameter estimate. Mosquito-related parameters (bite rate, *a*, transmission efficiency, *b*, and background mortality rate, μ) are black, fungal parameters (β and μ_F) are blue, and extrinsic incubation period (EIP) is red. Results assuming the low AR were similar (data not shown). (b) Predicted proportional reduction in infectious mosquito density at different levels of variation in extrinsic incubation period (EIP). Because the infectious mosquito density predictions were most sensitive to changes in EIP, we reduced or increased EIP by 5%, 10% or 40% and re-evaluated the model at 2 °C intervals from 18–34 °C assuming the high AR and a daily probability of fungal infection ('*c*') equal to either 0.16 or 0.04 (indicated on figure). The predicted reduction based on the original EIP estimates ('null') is included for reference. We also examined how other parameters in the model would interact with EIP to decrease the

proportional reduction in infectious mosquito density. We reduced EIP by 10%, repeated the sensitivity analysis, and found that increases or decreases of 10% in the other parameters had minimal impact on the predicted reduction, decreasing predictions by ≤ 0.016 at $c=0.04$ and ≤ 0.014 at $c=0.16$ (data not shown).