Study supports potential for injectable 'chemical vaccine' for malaria using atovaquone

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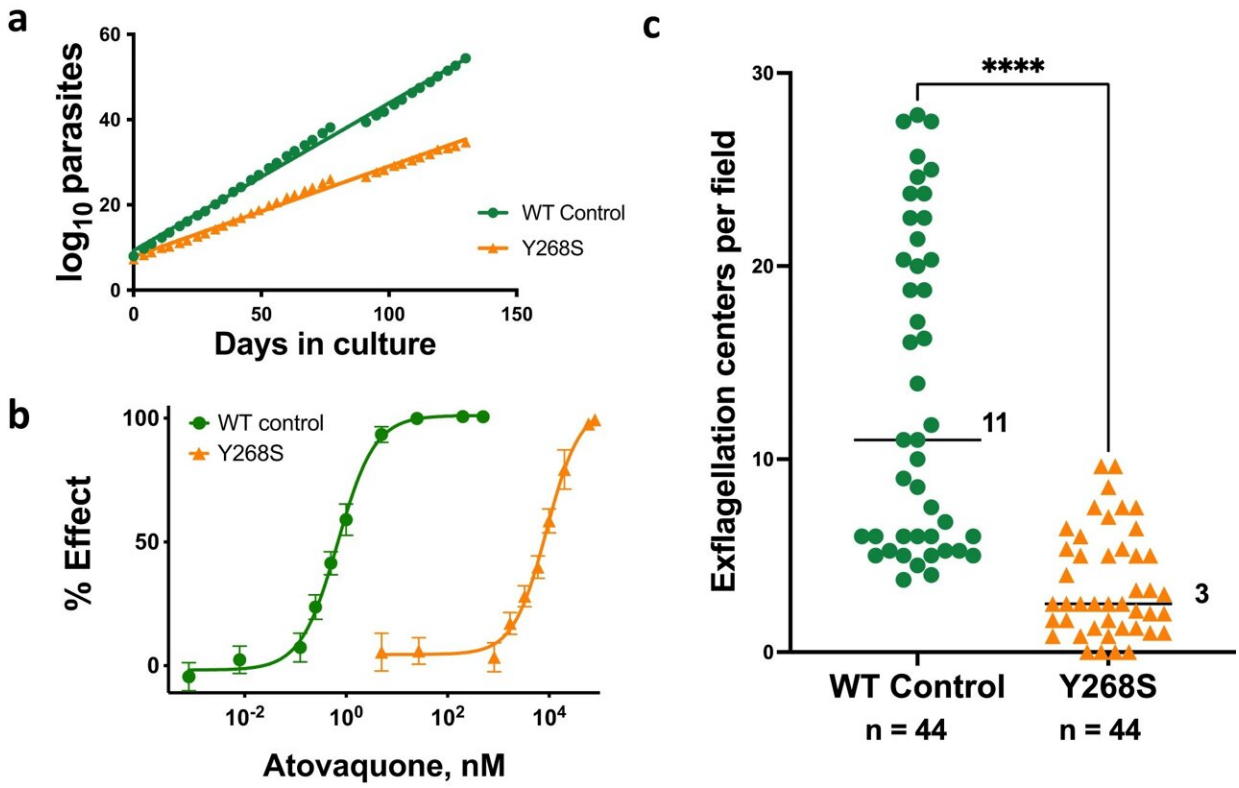

Phenotype characterization in vitro of isogenic wild type (WT) and cytochrome b Y268S mutant P. falciparum. **a** Cumulative number of asexual parasites in continuous culture. Growth rate of wild type parasites (y = 0.35x + 9.3) was 1.4-fold greater than that of mutant (y = 0.21x + 7.9); *n* timepoints = 36, R^2 > 0.99, data from one continuous experiment. **b** Atovaquone activity against WT or Y268S asexual erythrocytic parasites (EC_{50} 0.68 nM or 9.0 µM, respectively) was obtained by assaying [^{3}H]hypoxanthine incorporation as a function of

atovaquone concentration. Depicted are mean ± SD of quadruplicate determinations from each of three biological replicate experiments (for each data point $n = 12$; some SD are too small to extend outside the symbols); $R^2 \geq 0.994$. **c** Male gametocyte exflagellation, adjusted to 1.5% gametocytemia. *Bars*, median number of centers across four independent biological replicates (ranges 4 to 28 for WT, and 0 to 10 for mutant); *n*, the total number of fields examined; ****P