Supporting information

Pollitt LC, Huijben S, Sim DG, Salath RM, Jones MJ, et al. (2014) Rapid Response to Selection, Competitive Release and Increased Transmission Potential of Artesunate-Selected *Plasmodium chabaudi* Malaria Parasites. PLoS Pathog 10(4): e1004019 doi:10.1371/journal.ppat.1004019.











Comparison of parasite dynamics for the two replicate selection lines AS117P(art) and AS116P(art). Parasite dynamics for AS117P(art) (dark red) and AS116P(art) (orange) in untreated infections and in infections treated with 4, 16, or 32 mg/kg of Artesunate. Shaded area indicates the period of drug treatment. Data from Experiment 1 block A. doi:10.1371/journal.ppat.1004019.s002



16mg/kg no drugs 4mg/kg 16mg/kg no drugs 4mg/kg C. D. 2.5 3.5 3.0 2.5 2.0 16mg/kg 4mg/kg no drugs 4mg/kg no drugs 16mg/kg

Drug treatment and within-host competition: cumulative parasite densities from the start of drug treatment. Cumulative total parasite density (A–B) and cumulative total gametocyte density (C–D) after the start of drug treatment (day 6– 41 post infection). Drug selected line (AS117P(art)) is shown in red (A & C) and susceptible competitor (AI) in blue (B & D). Density of the drug-selected line significantly increases with drug dose for both asexuals ($F_{2,24} = 20.12$, p<0.0001) and gametocytes ($F_{2,24} = 9.50$, p<0.001). For the susceptible competitor there is a non-significant negative relationship with drug dose for asexual density ($F_{2,24}$ = 0.64, p = 0.54) and a significant negative relationship for gametocytes (F_{2.24} = 4.36, p = 0.024). Data are taken from experiment 3 and show summary statistics for the same patterns shown in figure 4. doi:10.1371/journal.ppat.1004019.s003

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FigS3

Cumulative gametocyte density (log10)

2.0

1.5

1.0

0.5