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**Ha T Nguyen\*** (nguyenht@lafayette.edu), 111 Quad Drive, Box 8054, Easton, PA 18042, and **Ryan A Warriar, Miranda I. Teboh-Ewungkem** and **Thomas Yuster**. *Optimization of P. falciparum gametocyte sex ratios via competitive and non-competitive strategies: the evolutionary implications.*

We analyze two distinct fitness optimization strategies for sex ratio determination for *P. falciparum* with varying fecundity. Initial results indicate that no polymorphic population containing both strategies is stable. The pure strategy that is the final evolutionary state depends heavily on the composition of the initial polymorphic population. (Received September 07, 2011)