

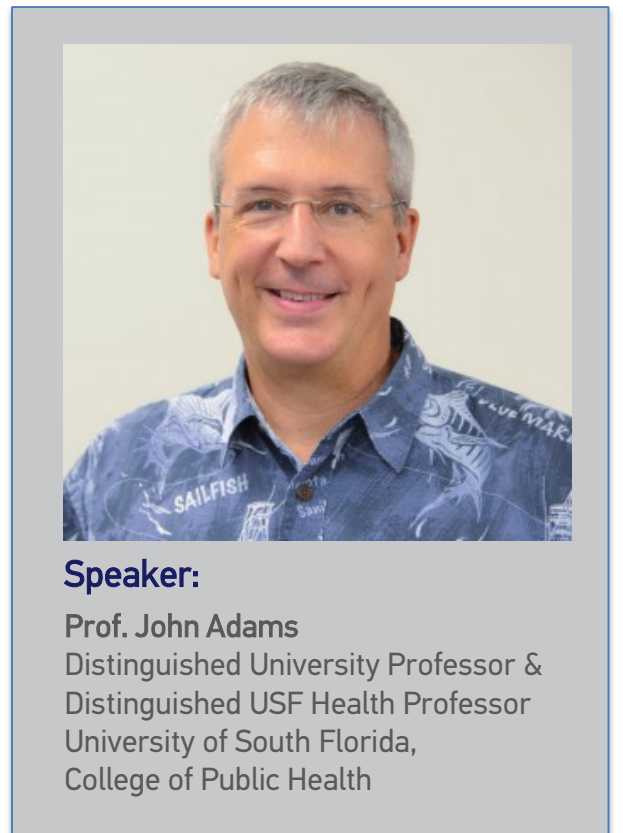


Seminar Announcement

Plasmodium falciparum survival of fever explored by a large-scale genetic screen and its relationship to artemisinin resistance

Date: 2 September 2019
Time: 11 a.m.
Venue: Classroom 2, SBS
Hosted By: Prof Zbynek Bozdech

Plasmodium falciparum blood-stage malaria parasites must survive the host fever-response to sustain infection and enable transmission. In this study, we developed a large-scale phenotypic screening pipeline of *piggyBac* mutants to identify *P. falciparum* genetic factors critical for parasite survival of febrile temperatures. Here we show that the major parasite processes critical for *P. falciparum* tolerance to febrile temperatures include regulating protein-folding, heat-shock proteins, proteasome-mediated degradation, and apicoplast isoprenoid biosynthesis. Based on the similarity of these innate febrile-response mechanisms to reported transcriptome changes associated with artemisinin resistance, we queried our mutant library to find that genetic defects that increase sensitivity of malaria parasites to fever correlated with increased sensitivity to artemisinin. These data suggest that the parasite exploits its innate febrile-response mechanisms for resistance to artemisinin.



Speaker:

Prof. John Adams
Distinguished University Professor &
Distinguished USF Health Professor
University of South Florida,
College of Public Health

Organized by:

