



Title	Aptamers against <i>P. falciparum</i> histidine rich protein 2 as a new approach to malaria diagnosis
Author(s)	Cheung, YW; Tanner, JA
Citation	The 2011 Croucher Advanced Study Institute Conference on Structure-Based Screening and Design of Ligands for Protein Targets, Hong Kong, 12-15 December 2011.
Issued Date	2011
URL	http://hdl.handle.net/10722/144668
Rights	Creative Commons: Attribution 3.0 Hong Kong License

APTAMERS AGAINST *P. FALCIPARUM* HISTIDINE RICH PROTEIN 2 AS A NEW APPROACH TO MALARIA DIAGNOSIS

Cheung YW, and JA Tanner

Department of Biochemistry, The University of Hong Kong, Hong Kong, China.

eungyaaa@graduate.hku.hk

Malaria is a life-threatening infectious disease caused by the protist Plasmodium, of which the species *Plasmodium falciparum* is the most severe. Approximately half of the world's population is at risk of malaria and most of the malaria cases occur in the developing world, where inadequate access to diagnostic tools leads to misdiagnosis or overuse of anti-malaria drugs. Although antibody-based rapid diagnostic tests have been developed they continue to have a number of problems, therefore point of care malaria diagnostics is an ongoing challenge. We are developing a new approach for malaria diagnosis by using aptamer technology. Here, we describe the purification of *P. falciparum* histidine rich protein 2 (HRP2), a diagnostic marker of *P. falciparum* infection. We also describe the selection and characterisation of aptamers against HRP2 carried out by Systematic Evolution of Ligands by Exponential Enrichment (SELEX). This work lays a foundation for the further development nucleic acid aptamers for malaria diagnosis.