**An experimental path to *Plasmodium vivax* DBP vaccine development**

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ABSTRACT: *Plasmodium vivax* malaria is a debilitating, sometimes life threatening, and economically repressive disease of most tropical countries except central Africa and still it is perceived as a relatively benign disease. Increasing prevalence of drug resistance in *P. vivax*, its global distribution and the appearance of more virulent forms of vivax malaria emphasizes the need for development of vaccines against this disease.  Blood-stage infection is mostly restricted to persons that express the Duffy blood group antigen and recognition of this human erythrocyte surface receptor is dependent upon the parasite ligand, Duffy binding protein (DBP).  The dominant B-cell epitopes in the DBP ligand domain are polymorphic surface-exposed motifs, although most are not functionally important for receptor recognition.  Since most naturally acquired infections with *P. vivax* tend to elicit weakly reactive antibodies to *P. vivax* strain specific DBP, these polymorphic dominant B cell epitopes may represent an evasion mechanism that misdirects the immune response away from the functional, more conserved receptor recognition epitopes.  A major obstacle for developing DBP as an effective vaccine is the high degree of polymorphism that evades immunity.