

# Stanford

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## Praveesh Valissery

Postdoctoral Scholar, Infectious Diseases

### Bio

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#### BIO

Praveesh was raised in Chennai, India and studied Biotechnology at the Loyola College while minoring in English Literature. He received his Ph.D. from the Jawaharlal Nehru University (New Delhi, India). He has experience in organic chemical synthesis and molecular biology. With Prof. Suman Kumar Dhar, he studied the cell cycle of the malaria parasite (*Plasmodium falciparum*) and worked on the optimization of water-soluble Artemisinin nanopreparations in the mouse model of malaria (*Plasmodium berghei*). His PhD thesis concerned "The design, discovery and improvement of novel and existing antimalarial compounds". He helped in the synthesis and characterization of a novel class of hybrid antimalarial drug, CQ-CFX.

In the Egan lab, Praveesh is interested in exploring essential protein-protein interactions taking place at the interface between the malaria parasite and the red blood cell at key moments during invasion. His research involves the use of genome editing tools, including lentiviral and adenoviral vectors to modify hematopoietic stem cells and generate genetically modified red blood cells by ex vivo erythropoiesis.

In the long term, he hopes to

1. acquire enough skill to study and develop antimalarial vaccine antigens and improve existing vaccine formulations.
2. employ a reverse genetics approach to understand mechanisms that facilitate parasite invasion using genetically modified red blood cells.

#### STANFORD ADVISORS

- Elizabeth Egan, Postdoctoral Faculty Sponsor