Novel Malaria Vaccine targeting Mosquito salivary proteins

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Description:

- Malaria is a worldwide infectious disease, causing over 1M deaths annually. RTS,S (Mosquirix™), the world’s only licensed malaria vaccine targets the circumsporozoite protein (CSP) and is only 27-46% effective.
- A novel vaccine approach targets mosquito saliva components. Mosquito saliva is injected into patients along with malaria parasite.
- Immunizing mice with antibodies against SG1L3, the lead mosquito salivary protein, showed substantial reduction of Plasmodium liver burden and parasitemia, when challenged with infected mosquito.
- Intellectual property – A provisional patent application has been filed.

Effects of immunizing mice with SG1L3 antibodies (A) Plasmodium liver burden in mice with no treatment, a known Plasmodium sporozoite transmission inhibitor (3D11 mAb against P. berghei CSP), an SG1L3 antibody, and an SG1L3 antibody and 3D11 mAb combination; (B) effect of SG1L3 antibodies on parasitemia in mice.

PI: Erol Fikrig

Licensing Contact: Lolahon Kadiri
lolahon.kadiri@yale.edu