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Abstract: Malaria is still one of the infectious diseases urgently requiring control and causes socioeconomic burdens on people residing in developing countries. Malaria vaccines are expected to control the disease. However, there is no effective vaccine available despite the intense efforts of malaria scientists. One strategy for a malaria vaccine is to prevent parasite spread by means of interfering with parasite development in mosquito vectors, which is the so-called transmission-blocking vaccine (TBV). We will here review the current progress of TBV. J. Med. Invest. 49: 118-123, 2002

Keywords: malaria vaccine, transmission-blocking vaccine, P. falciparum, P. vivax
The Journal of Medical Investigation Vol. 49 2002

transmission-blocking vaccines

Sexual development details in Fig. 2

human

sporozoites

Liver

merozoites

RBC

gametocytes

liver-stage vaccines

blood-stage vaccines

The diagram illustrates the life cycle of the Plasmodium falciparum parasite, showing the transition from sporozoites in the liver to merozoites in red blood cells (RBCs), and further development into gametocytes. This cycle is crucial for understanding transmission-blocking vaccines and their potential impact on disease control.
1. **Pfs230**

   *Pfs230* is a transmission-blocking vaccine that inhibits parasite spread by mosquito vectors. It is targeted at the *Plasmodium falciparum* sporozoite stage, preventing its entry into the mosquito midgut. This vaccine is effective in blocking the transmission of malaria from human to mosquito.

2. **Pfs48/45**

   *Pfs48/45* is another transmission-blocking vaccine that inhibits parasite spread by mosquito vectors. It is targeted at the *Plasmodium falciparum* gametocyte stage, preventing the development of gametocytes into infective female mosquitoes.

3. **Pfg27**

   *Pfg27* is a transmission-blocking vaccine that inhibits parasite spread by mosquito vectors. It is targeted at the *Plasmodium falciparum* ookinete stage, preventing the development of ookinetes into mature oocysts.

4. **Chitinase**

   *Chitinase* is a transmission-blocking vaccine that inhibits parasite spread by mosquito vectors. It is targeted at the *Plasmodium falciparum* sporozoite stage, preventing its entry into the mosquito midgut. This vaccine is effective in blocking the transmission of malaria from human to mosquito.

5. **Pfs25/Pvs25, Pfs28/Pvs28**

   *Pfs25/Pvs25, Pfs28/Pvs28* are transmission-blocking vaccines that inhibit parasite spread by mosquito vectors. They are targeted at the *Plasmodium falciparum* ookinete stage, preventing the development of ookinetes into mature oocysts. These vaccines are effective in blocking the transmission of malaria from human to mosquito.
**P. vivax**

**P. falciparum**

*Saccharomyces cerevisiae*

**in vitro**

**ex vivo**
Transmission-blocking vaccines that inhibit parasite spread by mosquito vectors

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Plasmodium vivax  and Plasmodium falciparum  are the causative agents of malaria.  Plasmodium vivax  is a protozoan that causes malaria by infecting red blood cells.  Plasmodium falciparum  also causes malaria but is more severe and can lead to life-threatening complications.