Rising to the challenge
The world’s first candidate vaccine for malaria

Malaria is a life-threatening disease caused by microscopic parasites that pass from person to person through the bites of infected mosquitoes.

How does the candidate vaccine work?
Our candidate vaccine is intended for use in children living in malaria-endemic countries in sub-Saharan Africa. It is designed to trigger the immune system to defend against the *Plasmodium falciparum* parasite as soon as it enters the human bloodstream.

How does infection spread?
1. A female mosquito bites an infected person, picking up *Plasmodium* parasites...
2. ...the infected mosquito bites someone else, feeding on their blood...
3. ...while feeding, it releases the parasite into the person...
4. ...the parasite reproduces in the person’s liver and goes into their bloodstream.
5. A person with malaria may experience symptoms that include fever, vomiting and diarrhoea...
6. ...another mosquito bites and becomes infected...
7. ...taking the parasite to its next victim.

The candidate vaccine is injected into muscle. It contains two main components:

Antigen
- Causes the human immune system to produce antibodies against the malaria parasite to fight infection.

Adjuvant system
- Enhances the human immune response to the vaccine antigen.
- Attack infected cells in the liver and limit the parasite’s ability to mature and reproduce.
- Develop antibodies which remain in the bloodstream to reduce future parasite invasions.

Specialised cells pick up the antigen and present it to the immune system to trigger an immune response.

The immune system stimulates cells in two ways to:
- Enhance the human immune response to the vaccine antigen.
- Causes the human immune system to produce antibodies against the malaria parasite to fight infection.

Malaria is most common in countries with tropical or sub-tropical climates. It is most prevalent in sub-Saharan Africa.

#fightmalaria