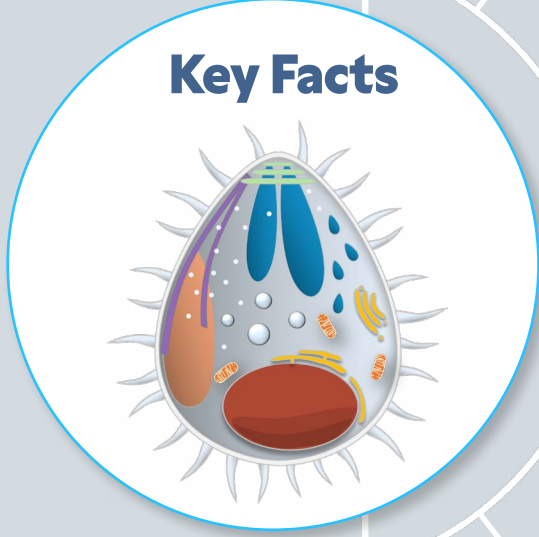


Malaria Research & Therapeutic Discovery

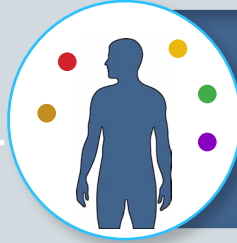
An Infographic



**Key Facts**



Malaria is a life-threatening disease spread to humans by female *Anopheles* mosquitoes.



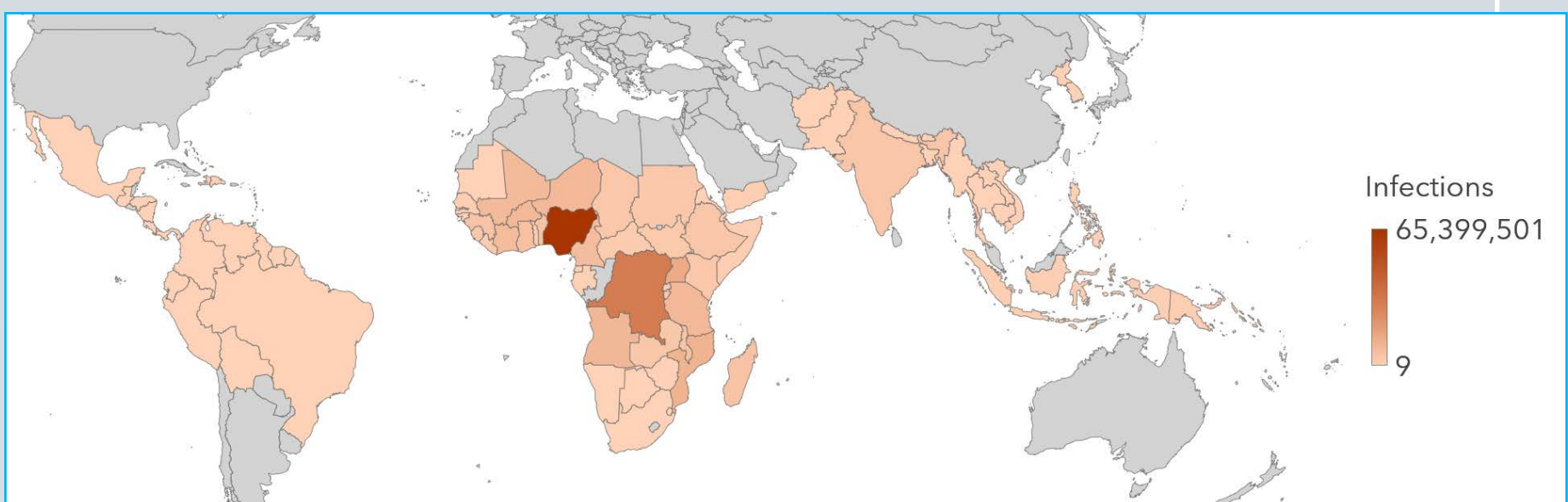
Five *Plasmodium* parasite species cause malaria in humans: *P. falciparum* (most common and deadliest), *P. vivax*, *P. malariae*, *P. ovale* and *P. knowlesi*.



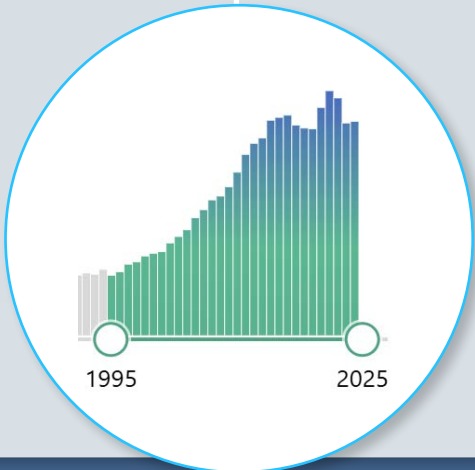
Globally in 2023, there were an estimated 263 million malaria cases (3.3% of the world population) and 597,000 malaria deaths in 83 countries.



Africa accounted for 94% of cases and 95% of deaths. Children under 5 accounted for 76% of all malaria deaths in the region.



**Research**



There are over 110,000 published research articles on malaria in PubMed. Publications per year remain steady with over 4000.



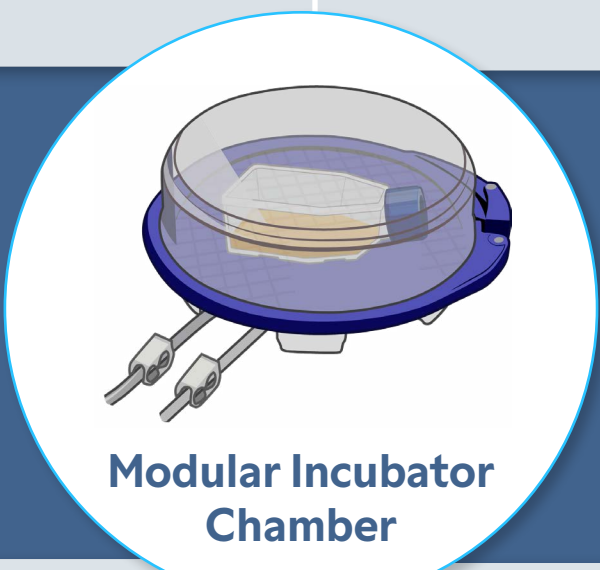
Global malaria research spending in 2023 reached \$690 million, representing a 9% increase compared to previous years.



Major funders of malaria research include: The Bill & Melinda Gates Foundation, The Global Fund, and the US NIH and CDC.

**In Vitro Cell Culture**

The Billups-Rothenberg (now Embrient) Modular Incubator Chamber has been a lab standard for low oxygen malaria tissue culture since the early 1980’s, cited in over 250 malaria publications.

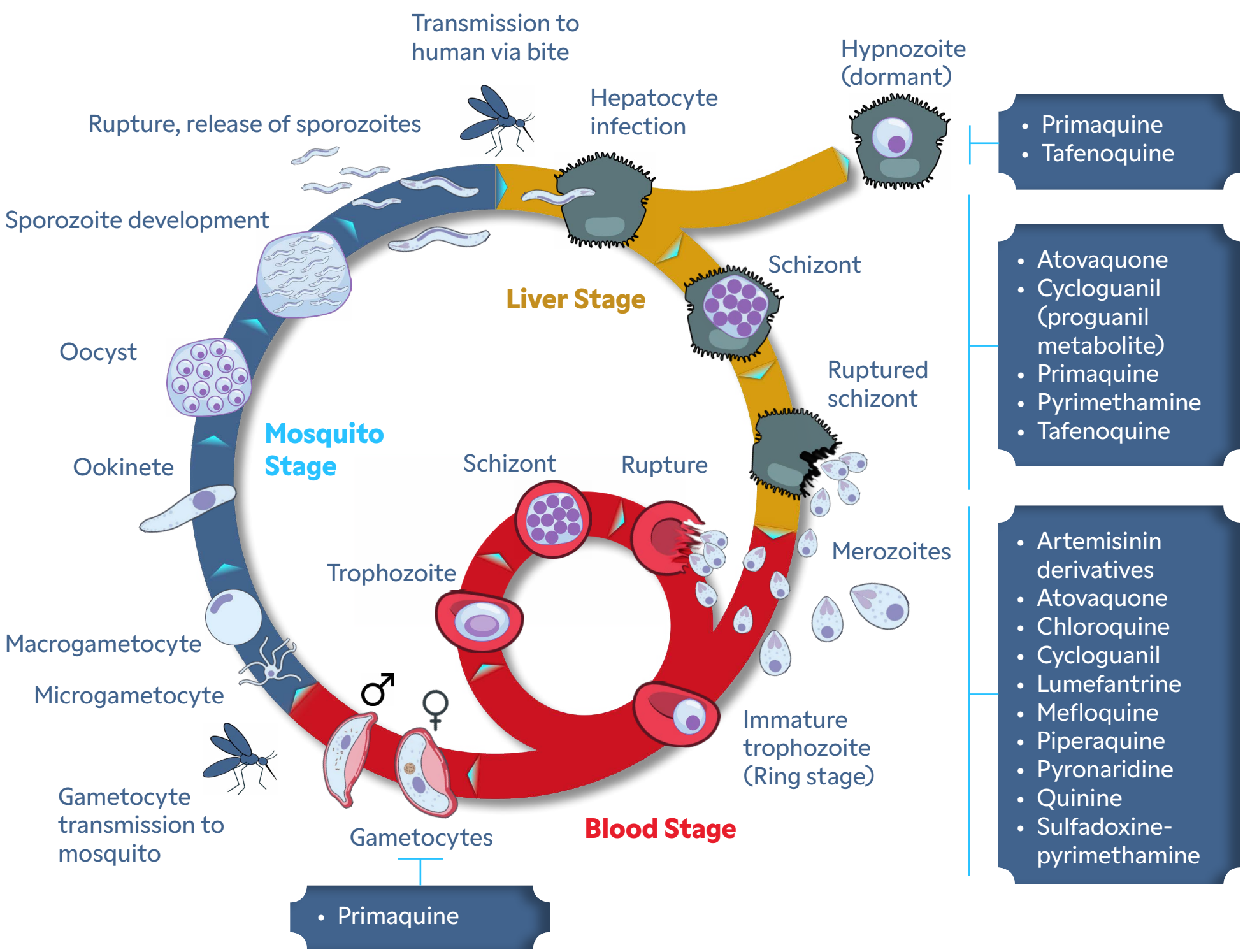


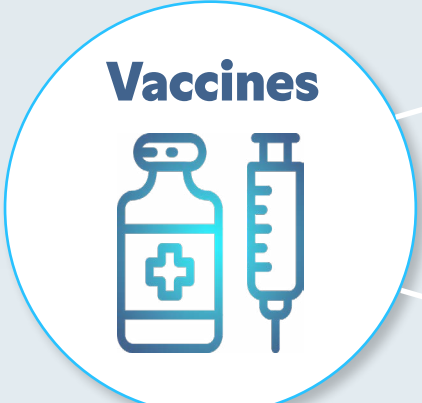
**Modular Incubator Chamber**

**Benefits:**

- Air-tight, sealed environment prevents cross-contamination
- Stable gas environment for at least 72 hours
- Small size minimizes consumption of costly gas mixtures
- Simple to use, easy to clean

Plasmodium Life Cycle & Therapies





**Vaccines**

**RTS,S/AS01**

Stimulates the immune system to target the circumsporozoite protein (CSP) of the malaria parasite, *P. falciparum*, interfering with the parasite’s ability to invade and multiply in liver cells.

**R21/Matrix-M**

R21 is a virus-like particle comprising the central repeats of Asn-Ala-Asn-Pro (NANP) and C-terminal sequence of CSP fused to the hepatitis B surface antigen.