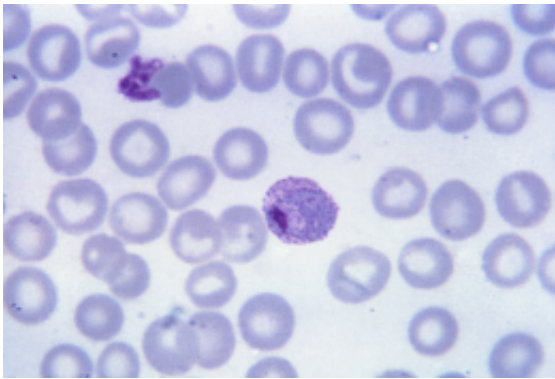


# A PLOS Medicine Collection on Plasmodium vivax—a neglected cause of malaria

April 23 2021

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This thin film Giemsa stained micrograph reveals a mature *Plasmodium vivax* trophozoite. *P. vivax* trophozoites show amoeboid cytoplasm, large chromatin dots, and fine, yellowish-brown pigment. RBCs are enlarged 1 1/2 - 2X, and may be distorted. If visible, Schüffner's dots may appear finer than those seen in *P. vivax*. Credit: CDC/ Steven Glenn

Strenuous efforts to prevent and treat malaria in recent decades have brought great benefits, particularly against disease caused by *Plasmodium falciparum* in countries in Africa and the Americas. But malaria caused by its "stealthier and more resilient cousin", *P. vivax*, now needs to be confronted with high priority, say Lorenz von Seidlein and Nicholas White of the Mahidol Oxford Tropical Medicine Research Unit in Bangkok, Thailand in a Perspective. The piece introduces a Collection on the prevention and treatment of *P. vivax* malaria in the open access journal *PLOS Medicine*, published ahead of World Malaria

Day on April 25th.

In a Review article in the Collection, Sarah Auburn of the Menzies School of Health Research and Charles Darwin University, Darwin, Australia and colleagues discuss the epidemiology of *P. vivax*. The parasite is endemic in an estimated 49 countries, and the authors highlight that the main burden of resulting disease falls on young children in [remote areas](#) poorly served by [health services](#).

Unlike *P. falciparum*, *P. vivax* has a dormant liver stage which makes the parasite more difficult to study and treat, leading to relapsing infections. As discussed by Cindy Chu of the Shoklo Malaria Research Unit, Thailand and White in a second Review article in the Collection, effective drugs are available but the 8-aminoquinolines cause hemolysis in people with glucose-6-phosphate dehydrogenase (G6PD) deficiency. This has limited the use of this class of drugs because infrastructure to support and provide G6PD testing is required prior to providing treatment.

In a further Review article, Kamala Thriemer and coauthors draw together the themes of the Collection and discuss the practicalities of the "radical cure" for *P. vivax* infection, aiming to eliminate all forms of the parasite in an individual and prevent malaria relapses. "The radical cure is not an optional add-on but has to be an integral part of *P. vivax* malaria treatment", say the authors. The Collection will also feature a range of research studies on key aspects of the prevention and treatment of *P. vivax* [malaria](#) and these will be published in the coming weeks.

**More information:** Lorenz von Seidlein et al, Taking on Plasmodium vivax malaria: A timely and important challenge, *PLOS Medicine* (2021). [DOI: 10.1371/journal.pmed.1003593](https://doi.org/10.1371/journal.pmed.1003593)

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Insights from conventional and novel surveillance tools, *PLOS Medicine* (2021). [DOI: 10.1371/journal.pmed.1003560](https://doi.org/10.1371/journal.pmed.1003560)

Cindy S. Chu et al. The prevention and treatment of *Plasmodium vivax* malaria, *PLOS Medicine* (2021). [DOI: 10.1371/journal.pmed.1003561](https://doi.org/10.1371/journal.pmed.1003561)

Kamala Thriemer et al. Towards the elimination of *Plasmodium vivax* malaria: Implementing the radical cure, *PLOS Medicine* (2021). [DOI: 10.1371/journal.pmed.1003494](https://doi.org/10.1371/journal.pmed.1003494)

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