



The rapidly changing world of malaria: where do we stand, and where do we go from here?

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The malaria world is changing rapidly. Massive gains have been fuelled by an unprecedented surge, over the past 10 years, in funding for research and control efforts. A new spirit has produced novel coalitions between public and private partners to spearhead the development of new malaria control tools – drugs, vaccines and insecticides. Research consortia are evaluating the broader and increasingly sophisticated use of existing tools, including the deployment of existing drugs for malaria prevention in infants and pregnancy, and operational evaluation of approaches to improve access to, and targeting of, artesunate-based combination treatments (ACTs). Improved coverage of key control measures, in particular insecticide-treated mosquito nets and deployment of ACTs, have been associated with reduced malaria burden in several settings. However, most would agree that additional tools will be needed to take malaria control to the next level in the many settings where Plasmodia and their vectors are ubiquitous. The challenge is exacerbated by the emergence of resistance against quinghaosu derivatives at the Thai–Cambodian border, and confirmation that *Plasmodium knowlesi* can indeed infect humans. Despite these developments, and more general fears about the impact on malaria research and control of the global economic crisis, there is renewed interest in elimination and ultimate eradication of malaria.

This special issue of *Therapy* highlights some of the recent developments. It provides a state-of-the-art overview by Mankhambo and colleagues on the management of the most-feared clinical manifestations of severe *falciparum* malaria [1], while Genton and Mueller unravel the myth of *Plasmodium vivax* being dubbed ‘benign tertian malaria’, a misnomer that has not stood the test of time [2]. There is a slowly but steadily growing armamentarium of effective antimalarial drug combinations, but the potential of efficacious drugs is often

compromised by inadequate malaria diagnosis and the resulting failure in targeting ACTs to patients with malaria. In an editorial, we discuss how the development of point-of-care rapid diagnostic tests, based on immunochromatographic antigen detection, could assist in turning the tide against malaria in endemic areas [3]. A further threat to the impact of ACTs, namely the emergence of counterfeit drugs in endemic countries, is discussed in detail by Kaur and colleagues [4].

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Another editorial by Kun *et al.* addresses the pressing problem of successes in malaria treatment being offset by the emergence of drug-resistant strains, reminding us of the old saying that prevention is better than cure [5]. But what is new on the malaria prevention front? A recently recommended strategy, intermittent preventive treatment in infants (IPTi), may have a role to play in some settings. However, all eyes are now set on what is likely to be the first commercially available malaria vaccine – RTS,S, which is currently in Phase III testing in seven African countries. A safe and efficacious vaccine could dramatically impact on malaria morbidity and mortality in Africa. Loucq provides an intriguing, vaccine developer’s perspective on the considerations in malaria vaccine development [6].

So, are calls for malaria eradication, even elimination, irrational, or are they the logical consequence of what has been achieved in the very recent past and of what will be accomplished in the coming decades? Drs José Nájera and Robert Newman, directors of WHO’s malaria program during the previous and current malaria elimination programs, respectively,



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are both interviewed in this issue [7,8]. Their conclusions? That malaria elimination is a worthy goal, even when the total eradication of the parasites may not yet be possible. As an ultimate goal, eradication may be considered the only acceptable end point. Whilst it will take more than we are able to do just now, amazing progress can be made by careful deployment of the tools already available today.

Financial & competing interests disclosure

The authors have no relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript. This includes employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties.

No writing assistance was utilized in the production of this manuscript.

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