

Malaria's resistance to drugs is truly bad news

Using the latest drugs against malaria sparingly where resistance is present could make them useful for decades, says Andrew Read.

By Andrew Read

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So it looks like the malaria parasite wins again. Two research teams in Cambodia have discovered parasites resistant to the only fully effective malaria drug we have left. This is truly bad news. Resistance has already arisen to all other classes of front line drug, and many early generations of wonder drugs are now rendered useless. The new discovery is of resistance to the artemisinin, the latest drugs. These form the backbone of plans to globally eradicate malaria.

For most of us in the business, the discovery is depressing news, but no great surprise. It was a matter of when, not if. We can easily make resistant parasites in the laboratory, simply by throwing drugs at the parasites, and artemisinin is no exception. There is an ongoing arms race between the drug developers and the parasites. Just to stand still will cost \$US2.5 billion over the next decade. Evolution is a very costly business.



It is considered to be an early warning sign that the parasite is developing resistance Photo: REUTERS

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The new discovery, if confirmed, signals the beginning of the end for artemisinin, but the end itself is a long way off. For one thing, the resistant parasites are still being killed by the drug – it just takes longer. High-level resistance has yet to appear. For another, the resistance has a long way to go before it is common even in Cambodia, let alone the world. There is talk of trying to eradicate malaria in this region of South East Asia before the resistance is exported to Africa. I frankly doubt that is feasible, but I hope I am wrong.

But something else can be done. Resistant parasites spread because of drug use. If artemisinin is used sparingly where resistance is present, it could remain globally useful for decades. Easily enough time to get next-generation drugs deployed. Let the sequel begin.

- Andrew Read researches the evolution of malaria parasites.