

Scientists develop new drug treatment for malaria

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As part of the £1.5 million project, researchers are now testing the drug to determine how the treatment could progress to clinical trials. The drug is made from simple organic molecules and will be cheaper to mass produce compared to existing therapies.

Malaria is the world's most deadly [parasitic infection](#), resulting in nearly one million deaths a year. The team at Liverpool have created a synthetic [drug](#) based on the chemical structure of [artemisinin](#), an extract of a Chinese herb commonly used in malaria treatment. The new drug, which can be taken orally, is more potent than naturally derived artemisinin.

Artemisinin is known to interact with a substance inside parasite-infected red blood cells, causing a chain of events that destroys malaria. The treatment, however, is difficult to mass produce and can be chemically unstable in the body. Scientists have now found a way of creating the most reactive part of artemisinin synthetically and fusing it with a cage-like structure made of [organic molecules](#) to make the drug more chemically stable. The stability of the chemical structure in the body makes the drug last longer, reducing the chance of the parasite reappearing.

Professor Paul O'Neill, from the University's Department of Chemistry, explains: "[Malaria](#) affects the world's poorest countries and hospitals are unable to afford expensive treatments. The problem with current artemisinin-based therapies is their limited availability, poor oral absorption and high cost. We have created a new drug that is easily

absorbed by the body, chemically stable and highly potent. It is made from very simple organic materials and therefore will be more cost-effective to mass produce than current therapies."

Provided by University of Liverpool

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