



LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE/SPFL

founder of Amyris, based in Emeryville, California. But he is hopeful that the work will lead to industrial production of other plant-based drugs in a similar way.

The prospect of plentiful artemisinin is encouraging, but if the parasite becomes resistant, increased drug production will be worthless. "The loss of artemisinin could spell disaster for malaria sufferers," warns Chris Hentschel, head of the non-profit Medicines for Malaria Venture, based in Geneva.

There is no consensus on how likely resistance is, but some think the risk is high. Artemisinin works by disabling a calcium pump in the malaria parasite, and last year researchers reported that the mutation of a single amino acid was sufficient to confer resistance (A.-C. Uhleman *et al. Nature Struct. Mol. Biol.* 12, 628–629; 2005). When another team gave low doses of artemisinin to parasites taken from patients in French Guiana, some mutated, becoming highly resistant to the drug (R. Jambou *et al. Lancet* 366, 1960–1963; 2005).

The main way to stop resistance arising is to always give the drug in combination with others. In January, the World Health Organization (WHO) made a plea to pharmaceutical companies to end the marketing and sale of single-drug artemisinin medicines. But as other malaria drugs grow increasingly ineffective, many feel that resistance to artemisinin is inevitable.

"We hope it won't happen," says Warhurst. "But looking for new drugs is important." ■

Narelle Towie

Two telescopes join hunt for ET

The search for extraterrestrial intelligence (SETI) will ramp up in coming months as two dedicated facilities come online — one to look, the other to listen.

A team led by physicist Paul Horowitz of Harvard University will begin scanning the skies this week for flashes of light from alien civilizations. Most SETI searches have been at radio wavelengths, but theorists surmise that extraterrestrials might also shine laser beacons visible from a few thousand light years away.

This will be the first optical SETI project to scan the entire sky, or at least all that can be seen from the Oak Ridge Observatory in Harvard, Massachusetts, where a 180-centimetre telescope has been installed. The \$50,000 instrument was paid for by the Planetary Society, a grassroots group of space enthusiasts, and will record flashes briefer than a nanosecond. No known natural process causes such flashes. The all-sky search requires 200 nights of clear viewing, and is expected to take several years.

Meanwhile, at the Hat Creek Radio Observatory in northern California, the first ten dishes of the privately funded Allen Telescope Array are due to be demonstrated later this month, says Peter Backus, observing programmes manager at the SETI Institute in Mountain View, California. With money from Microsoft alumni Paul Allen and Nathan Myhrvold, the institute, working with Berkeley, is building an array of 350 six-metre radio dishes dedicated to SETI. The entire array will eavesdrop on nearly a million stars for hints of intelligence.

Managers hope to have 42 antennas working by July. The first scan will be of a narrow swathe of the Milky Way's centre. ■
Tony Reichhardt

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See the future: how the Allen array might look.