









## **STALKING MALARIA**

## **Itching for a Cure**

INSIDE ROOM 323 of Portland State University's rather unimaginatively named Science Building One, chemist David Peyton stands at the center of what could be a set from the original *Watch Mr. Wizard*: Test tubes, beakers and exquisite sculptures of glass crowd the benches, and the intoxicating scent of ethyl acetate hangs heavy in the air.

The star of the show, though, is the round-bottomed flask that Peyton holds up to the light, pointing to a pinch of yellow powder inside. The innocuous spoonful of dust doesn't look like much, but it just might prove the undoing of malaria, a disease that kills more than 1 million every year, most of them in sub-Saharan Africa.

If Peyton's lab has a decidedly retro feel, that may be because the 50-year-old's medicine—a compound known as PL-65—represents the revival of a relatively old

idea. In the decades following World War
II, a "miracle drug" named chloroquine
seemed to have malaria on the ropes,
at least in many parts of the world.
Unfortunately, the parasite that causes

malaria developed a resistance to chloroquine by evolving a sort of molecular pump that siphons the drug away. Peyton wondered what would happen if he engineered a way to clog the pump.

"It's such a simple idea, I couldn't believe

no one else had come up with it," he says.

After years of tinkering, Peyton's team at PSU developed a family of chloroquine hybrids that short-circuit the parasite's defenses—in mice, at least. He hopes to begin testing on primates next year.

Of course, many drugs that yield great results in the lab turn out to be lousy medicines in the real world. The barriers

## Malaria kills more than 1 million people every year.

to success for an antimalarial drug are particularly intimidating: For starters, it must withstand high temperatures (there are no refrigerators in the African bush) and cost no more than 20 cents a dose (most people with malaria earn less than a dollar a day). Nonetheless, its developer is cautiously optimistic, calling the results "better than I'd dared hope for."

If everything goes well, Peyton's drug could reach the market in about 10 years. Which would also give PSU plenty of time to think about rechristening Science Building One as something with a little more panache, like, say, Peyton Place.

—Chris Lydgate