

## THE FINANCIAL PAGE NO PROFIT, NO CURE

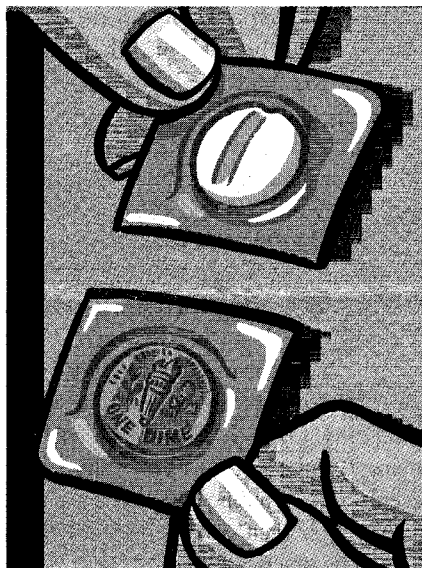
Last week, the United States won what was deemed a victory in the war on bioterrorism. Tommy Thompson, the Secretary of Health and Human Services, cut a deal with the Bayer Corporation to buy a huge batch of the anti-anthrax drug Cipro at ninety-five cents a tablet, half what Bayer had been asking. Thompson “negotiated” the lower price by threatening to break Bayer’s patent on the drug.

The ultimatum was curious, given that there was no real Cipro shortage, and that, as one of Thompson’s own advisers said, other drugs, such as doxycycline, have been shown to be just as effective against anthrax. In fact, after the deal, other drug companies cleverly offered to donate shipments of their own antibiotics to the government, as long as the Food and Drug Administration authorized them for use against anthrax. (The offer was good P.R. and good business, given the commercial value of the F.D.A.’s imprimatur.) So Thompson’s threat to commandeer the Cipro patent was a response not to a medical crisis but to a political one. The Bush Administration was under a great deal of pressure, most notably from Senator Charles Schumer, who had been pushing it to override Bayer’s patent. “One company should not be able to stand in the way of the health needs of the nation,” Schumer told me last week. “And Bayer should not be reaping profits from this crisis.”

It’s an appealing sentiment, but Schumer’s cure is worse than the disease. Profits are the reason that drugs like Cipro exist in the first place. Bayer invested hundreds of millions of dollars to develop and produce Cipro because it believed that it would own the Cipro patent for sixteen years—enough time for it to recoup its investment and reward its shareholders. Proclaiming that companies shouldn’t profit in a time of need is a fine way to discourage them from making such investments.

We don’t have to guess what happens to antibiotic research and development when profits dry up. We know, because we saw what happened thirty years ago.

At that point, the battle against infectious disease appeared to have been won, at least in the developed world. In 1967, the Surgeon General, William Stewart, declared, “The time has come to close the book on infectious diseases. We have basically wiped out infection in the United States.” The old drugs could handle whatever bugs came along; there was no market for new ones. So drug companies essentially stopped putting money into antibiotic research. Besides, given the choice between making an antibiotic that a person might take for two weeks once in a lifetime or developing an antidepressant that a person would take every day for the rest of his life, drug companies naturally opted for the latter. That’s why



in the past twenty-five years they have developed just one new class of antibiotic; and it’s why in 1999 only three of the thirty-five new drugs approved by the F.D.A. were antibiotics. The blockbusters of the nineteen-nineties that treated chronic conditions—depression, high cholesterol, impotence—were drugs like Prozac, Lipitor, and Viagra. Biotechnology just followed the money.

And now we are facing a crisis in antibiotics. We desperately need new drugs to fight infectious diseases—not just agents of bioterrorism, like anthrax or even the strain of drug-resistant super-anthrax which has reportedly been developed in Russia, but a host of more mundane deadly bugs, like virulent drug-resistant strains of tuberculosis, pneu-

mococcus, and staphylococcus. Today, infectious diseases are the third leading cause of death in the United States; every year, fourteen thousand people die from drug-resistant infections acquired in American hospitals. More than thirty new infectious microbes have been discovered in the past two decades. “There is an enormous number of microbes around, and they are constantly fighting back against the drugs,” Gary Woodnutt, a vice-president of microbiology at GlaxoSmithKline, said. “Over time, there’s been an inexorable rise in their resistance.”

A burgeoning need for new drugs means a burgeoning market. Lately, drug companies have come to recognize the importance—the potential profitability—of combating infectious diseases. This year, they are projected to spend \$4.1 billion on antibiotic research. Advances in genomics and molecular biology have made it possible to fight microbes in entirely new ways. “The genomics revolution really was a revolution as far as antibiotics are concerned,” Woodnutt says. “We’re in a new age of drug discovery.”

Unfortunately, drug development is a long, expensive, and uncertain process. It can take fifteen years and hundreds of millions of dollars to go from finding a bacterial target to putting a drug into production. Now more than ever we want to encourage drug companies to devote their considerable resources to antibiotic R. & D., rather than to another treatment for baldness or impotence. Is this the moment to inform them that if they come up with something of genuine worth, something we vitally need, we may just decide to break their patent?

In a market economy, the most important signal is price. It tells companies what people value and what they don’t. As a nation, we scarcely thought twice about paying Bell Boeing billions of dollars for a fleet of Osprey tilt-rotor aircraft. We’ve never demanded that Northrop Grumman deliver its Stealth bombers at half price. Yet in the war on bioterrorism we begrudge Bayer its profits, making good health look like bad business. We got a great price on Cipro last week. But we may pay for it later.

—James Surowiecki