
Patent Medicine

BY DEAN BAKER

Absurdly high prices have put lifesaving prescription drugs out of reach for millions of Americans and for hundreds of millions of people in developing countries. In large part, patent protection is to blame. The patent system is a trade-off: Consumers pay a monopoly price on a drug for 17 years to provide incentives for firms to undertake research that yields large profits. But the patent system is not the only way to support drug research. Alternatives that have a proven track record of success already exist—specifically, research supported by foundations, universities, and the government. Shortening patent terms and putting most pharmaceutical research in the public domain would cut costs for consumers as well as for government. And contrary to industry propaganda, doing so would not reduce innovation.

This idea may sound radical, but look at the numbers. The drug industry currently spends around \$18 billion a year on socially useful research. If research spending grows at a real rate of 3 percent annually, expenditures would total about \$240 billion over the next decade. By comparison, the prescription drug plan proposed by Al Gore would cost \$250 billion. If the government just picked up the full tab for drug research and did away with patent protection, most seniors would end up paying less for drugs than if the Gore plan were put in place. The federal government would save \$10 billion right off the bat, in addition to savings on drug costs incurred in Medicare or Medicaid. And the rest of the population would pay 75 percent less for prescriptions.

When the patent system for prescription drugs is challenged, or when price controls or liberalized importation rules are proposed, we're warned about the perils of stifling innovation and tampering with the market. But patents are themselves a market distortion—an explicit form of government intervention: The government grants a prize (a 17-year monopoly) to people who innovate. This monopoly in effect transfers income from consumers to pharmaceutical companies. But this is neither the only nor the most efficient way to promote innovation.

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Pricing patterns in nations without effective patent protection, and on drugs after their patent has expired, suggest that the free market price for drugs averages about one-quarter of the monopoly price. In the United States, which spent approximately \$106 billion last year on prescription drugs, consumers would save \$79 billion if this patent protection were dropped.

What consumers get for this \$79 billion in higher drug prices is \$22.5 billion in domestic research from the pharmaceutical industry (another \$4 billion is conducted abroad). Consumers pay more than three and a half dollars to the drug industry for every dollar of research induced by patent protection. Another two and a half dollars goes to industry profits and marketing—and to the legal costs, campaign contributions, and political lobbying needed to protect and extend the industry's patent monopolies.

Worse, much of the research conducted by the drug companies is directed not toward breakthroughs to better our lives but toward finding ways around the lucrative patents of competitors. When a drug company scores a big hit with a drug like Viagra or Claritin, competitors patent comparable but slightly different drugs so that they can enjoy a slice of the market. In a world with patent protection, this kind of limited competition can be beneficial to consumers. After all, some competition is better than none; also, a copycat drug may incidentally benefit people who react poorly to the original drug. In a competitive market, however, pure copycat research would be dropped in favor of research funded by public sources

and likely to produce real improvements. [See Merrill Gozner, "The Price Isn't Right," *TAP*, September 11, 2000.]

It is difficult to pin down how much of the industry's research spending is devoted to copycat drugs. When assessing the importance of new drugs, the Food and Drug Administration (FDA) has historically considered fewer than one-third to be qualitatively new drugs. Of course, on average, new drugs cost far more to develop than replacements for existing drugs. But even if just 20 percent of the pharmaceutical industry's research were seen as wasted in copycat efforts and therefore cut, the industry's annual research budget would drop from \$22.5 billion to \$18 billion a year.

Prescription drugs present a classic case of asymmetric information: The drug companies know more about their drugs than the doctors who prescribe them, and far more than the patients who take them. Monopoly profits are an enormous incentive for companies to overstate the benefits and understate the risks of the newest wonder drugs. In fact, there is evidence that published research findings may be influenced by the drug industry's support. As Philip J. Hilts pointed out in *The New York Times*, when drugs were tested by researchers who were supported by the drug's manufacturer, they were found to be significantly more effective than existing ones 89 percent of the time. In contrast, when drugs were tested by neutral researchers, they were found to be significantly more effective only 61 percent of the time.

One recent study (by O.M. Shapira and colleagues at Boston University, in the September 2000 issue of *The Annals of Thoracic Surgery*) estimated that consumers waste \$6 billion a year on patented calcium channel blockers, which are no more effective than generic alternatives in treating heart problems. Many other studies have also found that widely used drugs are often no more effective than cheaper alternatives. The costs are even greater when distorted information endangers health through the use of less effective drugs or ones that have harmful side effects. Monopoly drug pricing creates room for a gray market and black market in prescription drugs. The former got considerable attention recently as the result of several highly publicized bus trips to Canada by senior citizens seeking lower drug prices. While there is probably little basis for concern about the quality of drugs in Canada, the same may not be true of drugs sold in Mexico and other developing nations. Furthermore, as backdoor channels of drug supply develop, more and more drug use is likely to occur without doctor supervision. Since the mixing of drugs is often dangerous, and since patients may react differently to the same drug, the lack of proper supervision is a recipe for disaster.

Fortunately, there is an alternative to patent monopolies, and it is not merely hypothetical. Though the pharmaceutical industry is spending \$22.5 billion on drug

research each year, by the industry's own estimate this is less than half of the total annual amount spent on biomedical research in the United States. The largest chunk of the rest, about \$15 billion, comes from the federal government through the National Institutes of Health (NIH). Another \$3 billion is provided by other federal agencies, such as the Centers for Disease Control and Prevention. Universities, private foundations, and charities together fund approximately \$10 billion worth of research annually.

The research supported by government and nonprofit institutions has led to numerous medical breakthroughs over the years, including the discovery and development of penicillin and the polio vaccine. More recently, NIH-supported research played a central role in the development of AZT (azidothymidine) as an AIDS drug, and Taxol, one of the leading cancer drugs. The impressive list of accomplishments at the NIH contradicts the claim that somehow the government cannot support effective research.

Historically, the NIH has focused on basic research and early phases of drug testing, whereas the pharmaceutical industry has been primarily engaged in the later phases of testing, which include clinical trials and carrying drugs through the FDA-approval process. But this division of labor is arbitrary. The NIH has done research in all areas of drug development; in some cases, the agency has even secured FDA approval. There is no reason to believe that, given enough funding, the institutes could not oversee all phases of drug research at least as effectively as the pharmaceutical industry does at present.

It is worth noting that there is a long history of publicly minded research scientists who have worked out of a desire to save lives, not to enrich themselves. For example, Selman Waksman labored for decades at Rutgers University before he eventually discovered that streptomycin could be an effective cure for tuberculosis. Even though he did get a patent on streptomycin, he used the royalties to finance an institute devoted to the study of other infectious diseases. Jonas Salk, another socially conscious scientist, developed the polio vaccine and never sought to patent it; his research in this area was supported by the National Foundation for Infantile Paralysis. Howard Florey, who discovered a method to mass-produce doses of penicillin, also never patented his process. Because he continued his research during World War II, with support from the Department of Agriculture, penicillin was widely available by the war's end to treat wounded soldiers. Few of these scientists became multimillionaires, but all were well-compensated professionals. This subculture of research motivated by the search for scientific knowledge and the quest for drugs to provide broadly diffused benefits is now at risk. The push for industry profits is crowding out other goals and turning scientists into moguls. The elimination of patent protection would

not require researchers to act strictly from humanitarian motives. With tens of billions of research dollars available, there would be ample resources to reward scientists for advancing knowledge in public health.

Under the patent system, by contrast, there is increasing pressure on our best researchers to devote their skills to figuring out how to help rich people look young forever or have tall children. Patents on designer drugs in these areas are likely to be lucrative. A quite different form of government intervention would place a higher priority on, say, research directed toward curing sickle-cell anemia or malaria. (Even without patents, the wealthy would be free to support research on drugs that will improve their lifestyle; they just wouldn't be able to count on the government to help them recover their ex-

penses.) And with a different system, poor people throughout the world would not be denied access to medicine by a government-sanctioned monopoly even when they are prepared to pay the free market price.

If we believe in free trade, it makes no sense to give long-term patent protections to pharmaceuticals. In reality, prescription drugs are a social good. Like other medical services, we should distribute them on the basis of need; one way or another, we end up paying for their retail costs socially. It would be more efficient to pay for their research and development socially as well.

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