

3. THE U. S. BIOTECHNOLOGY MARKETPLACE

By government definition and count, there are about 1,300 companies applying biotechnology in the U.S. About 673 of them, mostly new and rather small, were founded to exploit scientific discoveries coming from academic research labs. About 440 companies supply materials, equipment and services used in biotechnology R & D. Nearly 200 established pharmaceutical, medical supply and chemical firms are also involved in biotechnology. These firms are sometimes linked together as the "biotech industry" because they share business alliances and concerns with regard to regulation, patent protection and R & D needs. About 57,000 people are employed in 572 mainly small biotechnology firms and an additional 13,000 people are employed in 147 supply firms. Because of the haziness of definition, total industry employment figures are unavailable.

The U.S. biotechnology market is thought to be very fast-growing. A lot of firms have entered the marketplace during the past few years with a great deal of fanfare, particularly from the financial community. However, many more products have been promised than delivered to date. Unofficial estimates indicate that shipments by U.S. biotechnology firms may have reached \$4 billion in 1992, up from \$3.1 billion in 1991.

ESTIMATED U.S. BIOTECHNOLOGY PRODUCT SHIPMENTS

<u>Year</u>	<u>Shipments</u>
1992	\$4.0 billion
1991	3.1
1990	2.2
1989	1.5
1988	1.0
1987	0.6
1986	0.35

According to the Pharmaceutical Manufacturers Association, as of August 1991, there were 132 biotech-derived medicines in clinical trials, a 60 percent increase in four years. According to a February 24, 1992 article in *The Wall Street Journal*, the biotechnology industry appeared poised for rapid growth as it moved into its second decade. The industry had shown that it can deliver marvelous drugs and captivate Wall Street, and by some estimates, was projected to jump seven-fold in revenues to \$40 billion by the end of the decade. The article went on to indicate that in the industry's early days, the main strategy was to "go with what science you have and hope you can get there first." But now, businesses had to be more selective, placing a smaller number of bets by carefully analyzing patent positions and market potential, which involved not just a drug's therapeutic value, but also how likely the federal government and other health insurers were to pay for it.