

Concocting a Cure

For Japan's pharmaceutical industry, the business environment in the 1980s has been anything but easy. In the first half of the decade, the government was forced to reduce the national cost of medical treatment, leading to substantial cuts in official prices for prescription drugs. At the same time, Japanese producers found themselves faced with increasing competition from both foreign pharmaceutical makers and Japanese chemical and foodstuff firms advancing into the drug business.

More recently, however, the picture has improved. The Ministry of Health and Welfare has continued to lower official prices, but not as drastically as before. New drugs, meanwhile, are enjoying good sales, while the cost of medical treatment is again on the rise primarily because of the increasing number of elderly people. As a result, the value of pharmaceutical production began to climb again in 1986. This, combined with producers' own efforts to streamline operations, will boost the combined pretax net income of the 20 leading companies by an estimated 15-20% in year-on-year terms in 1987.

Both official prices and the pricing mechanism naturally have a major impact on producers' sales. Discussions have continued for years on ways to curb excessive price competition in the industry, but as the ministry has found out, reductions in official prices in the past were followed by further discounting aimed at increasing market share in an oversaturated market. That in turn led to further cuts in official prices in a vicious circle. Nonetheless, a May 1987 report by

a board of advisers to the health and welfare minister recommended only minor modifications in the pricing mechanism. With the vicious circle largely intact and medical costs climbing, the ministry is expected to reduce its official prices substantially around the spring of 1988. Drug producers cannot afford optimism about sales this year. Over the long term as well, drug makers will have to operate in a difficult environment as the government stands by its commitment to hold down medical costs.

Given the harsh situation, major pharmaceutical producers are redoubling their research and development projects. Most new drug development centers on anticancer agents and antibiotics, for which there will be a rising need as the number of old people in Japan increases. Some companies are also stepping up technology exports to foreign companies, or are seeking to reduce development costs through joint R&D with overseas producers. Not all companies are equally aggressive about internationalization, however, and the gap between the industry leaders and other companies is likely to widen in the years ahead.

In biotechnology, initial high hopes and booming research have given way to a more realistic approach based on long-term strategy.

Needless to say, biotechnology has numerous applications ranging from pharmaceuticals to food and chemicals, and companies in many industries are engaged in R&D efforts. When it comes to actual commercialization, however, these companies tend to combine their traditional technical know-how with their new



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biotechnology skills. Increasing numbers are also trying to reduce their commercial risks by carrying out joint R&D projects with other interested firms. They are also painfully aware of the need to reduce the cost of basic and advanced research through cooperation among industry, government and the academic world. Various government agencies have already increased their efforts to promote biotechnology, including creating related organizations, increasing loans and investment for R&D projects, and revising guidelines for recombinant DNA experiments.

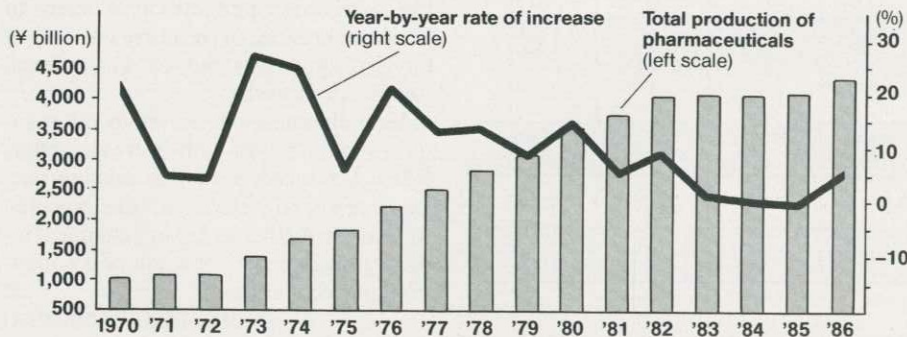
Pharmaceuticals have become the first commercial products to be manufactured using biotechnology. Early products included insulin, human growth hormone and beta-interferon. An alpha-interferon was commercialized in 1987. Products still in the development stages include TPA (tissue plasminogen activators) and interleukins as antiviral and anticancer agents. Food-related products include goods based on yeast improved by cell-fusion technology. Progress has been made in bioreactors on production of sweeteners and other natural food additives.

In plant biotechnology, growing point culture and embryo culture techniques have been developed for flowers and new varieties of vegetables. The chemical efforts include amino acid production and the use of cell cultures to produce useful substances. Steady progress has thus been made in the commercialization of biotechnology.

As they have acquired general biotechnology skills, many companies are now singling out specific R&D themes and targets. More commercial debuts are expected in 1988. It will still take time for biotechnology to emerge as a full-fledged industry. It is certain, though, that these many companies will eventually form a huge biotechnology market.

(Masao Mori, economist)

Production of Pharmaceuticals



Source: Statistics on pharmaceutical industrial production, Ministry of Health and Welfare