

OECD REPORT

BIOTECH'S MAJOR IMPACT YET A DECADE AWAY

PARIS—Biotechnology could, through rapid scientific and technical advances, become a net creator of employment beyond the next decade. Among developments contributing to this trend will be an increase in the number of new (rather than substitution) products in industry, innovations in environmental protection, and the emergence of novel agricultural crops. The number of jobs in R&D will increase over the next 10 years, too, although cost reduction policies will mean that overall employment in biotechnology companies is unlikely to grow. Beyond the turn of the century, biotechnology could begin to play an economic and social role comparable to that of information technology and then, in the second decade of the next century, have major macroeconomic impacts.

These are among the conclusions of the Office of Economic Cooperation and Development's (OECD) latest biotechnology report, "Economic and Wider Impacts of Biotechnology." The study completes the Committee for Scientific and Technologi-

cal Policy's work, initiated at the time of the first OECD report in 1982, on long-term impacts of biotechnology.

Written by five authors, including both external consultants and the organization's secretariat, the new report also draws on the results of a 17-country survey of 94 companies with interests in biotechnology.

Reviewing the "potentially very broad range of applications for new biotechnology," the report warns that "the actual range is much narrower" and points out that during the last 2-3 years, companies have become more concerned with technical limits, costs, and market demand. "The early years of industrial R&D in biotechnology have been dominated by a strong 'science-push.' Product development often focused on scientific and technological feasibility, rather than on real market needs, and not enough attention was paid to costs."

"The overwhelming majority of the 94 interviewed companies have plans (which does not always mean budgets) in biotechnology, and approximately two-thirds intend to develop [rDNA-derived] biotechnologies...Di-

versification into new biotechnology is very noticeable in the pharmaceutical and, albeit to a lesser extent, in the agro-industrial companies; it is weak in the food and feed sector. Considering that many of the 94 companies are small and/or not in particularly 'science-based' sectors of the economy, the high overall proportion of companies moving into biotechnology seems to indicate that this movement is both broadly based and fast."

In addition to better international harmonization of patent protection (which is "essential for the large scale diffusion of biotechnology"), the report identifies public confidence as the potentially principal factor determining its rate of acceptance. "Even where a product or process may be scientifically acceptable, a company could judge that public reaction to it may be unfavorable, with the result that management may prefer not to market the new product," writes one of the report's principal authors, Salomon Wald (*OECD Observer* 156:20, 1989). "Some companies have already taken that line of least resistance."

—Bernard Dixon

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