IAF BioChem

IAF BioChem, a small Canadian biotechnical company has entered into a strategic alliance with a British-based multinational giant, Glaxo Holdings PLC. Glaxo has 38,000 employees and an annual R&D budget of over $1.2 billion. IAF BioChem may be small, but it has a strong R&D base: 60 of its 80 employees are involved in R&D and 40 of these have Ph.D.s. The alliance will use Glaxo's financial, marketing and technical power to bring IAF BioChem's leading edge products to an international market.

IAF BioChem produces drugs, vaccines, fine chemicals and diagnostic kits. The company was started in 1986 by a group of scientists who bought the pharmaceutical facilities of the Armand Frappier Institute at the University of Quebec in Laval, just north of Montreal. They hold 10% of the shares while two institutional investors, the Quebec Savings and Investment Fund (Caisse de depot et de placement du Quebec) and the Solidarity Fund of the Quebec Federation of Labour, hold a majority of the shares.

IAF BioChem announced its strategic alliance with Glaxo early in 1990. Under the terms of the alliance, the British corporation paid $15 million for exclusive rights to BioChem's new anti-AIDS drug throughout the world except for the U.S. and Canada. The two companies are working together on the preclinical research for the drug. It has been selected by the U.S. National Cancer Institute in 1990 as the best and most promising candidate to replace AZT, a drug notorious for its side effects.

In November 1990, the agreement between the two companies was extended to include another promising BioChem drug, this time an anti-cancer drug. It too is less toxic and more effective than any other existing compound of its type. The two companies have formed an R&D and marketing joint venture. Glaxo paid $25 million for a 10% equity interest in it and kept a two year option for another 10% of IAF BioChem's shares.

Some observers estimate that because of such setbacks the European biotechnology industry is now three years behind Japan and the U.S. Europe has very likely lost its lead in molecular biotechnology, the U.S. dominates genetic engineering, and Japan is the world leader in advanced fermentation and separation technology.

Mergers and acquisitions have accelerated in the industry. EC companies have been acquiring or buying minority or majority stakes in both European and American companies. This may have more to do with the positioning of large companies on global markets than it does with 1992.

Markets

The various applications of biotechnology have one thing in common: they all make use of living systems to carry out tasks or to make new products. Pharmaceuticals account for 68% of the biotechnology sector in the world, while food and agriculture make up another 24%.

Biotechnology has been used to improve livestock and plants, but it has many other agricultural applications, including the development of fertilizers. Early work in this area by Saskatoon-based Microbio Rhizogen Corp. led to its purchase by Agricultural Genetic of the U.K.

The Canadian sector has a strong international advantage in those areas where biotechnology has been applied to the resource-based industries, particularly in forestry, mineral extraction and pulp and paper manufacturing. There are also a number of promising applications in pollution control.

The most frequent commercial applications in biotech areas, however, are found in medical applications and plant genetics. While new therapeutic products have been slow to emerge, the most promising commercial area lies in the development of new diagnostic kits. There are a number of successful Canadian companies in this area, including ADI Diagnostics, APO Diagnostics, IAF BioChem International, Biomira and Canadian Bioclinical.

The other currently commercially-viable sector of medical biotechnology is the manufacture of vaccines and immunostimulants. There are successful Canadian exporters in these areas for both human applications (Connaught Bioscience) and animals (Vetrepharm).

EC Program

The BRIDGE Program — Biotechnology Research for Innovation, Development and Growth in Europe — covers information infrastructures (culture collections, data processing), enabling technologies (protein design, molecular modeling, gene mapping, biotransformation), cellular biology and pre-normative research (e.g., safety assessments and the evaluation of toxicity). Scheduled between 1990 and 1993, BRIDGE has a budget of $96 million.

Outlook

Because Europe lags behind somewhat in biotechnology, much of the trade-liberalizing consequences of the Single Market will benefit non-EC firms. Thus the principal competitors to Canadian firms entering the market will be American and Japanese firms. This will be tough competition, but there are openings to be exploited and a number of Canadian firms are already successfully taking advantage of them. Many of these Canadian firms have chosen to qualify as European companies by setting up a European subsidiary, either wholly-owned, jointly-owned with another Canadian company, or as a joint venture with a European firm.