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Looking Ahead

Biotechnology By the Numbers

This summer, the U.S. government will get its first clear picture of the size and state of the biotechnology industry, thanks to a survey ("Critical Technology Assessment of Biotechnology in U.S. Industry") being conducted by the Department of Commerce.

The department hopes to collect information on new science coming down the pipeline; how much money is being invested in technology development by public and private groups; and the "economic health and competitiveness of U.S. companies that engage in biotechnology." Never before has the government singled out the biotechnology industry for such close scrutiny. The Census Bureau, which studies other industries, has never collected data on the biotech sector, and biotech isn't listed in the industry classification system shared by the U.S., Canada, and Mexico.

Two factors seem central to this increased interest: expectations of rapid growth in the biotech sector in the years ahead, and the central role of biotech in both medicine and national security. Of particular interest to the Commerce Department are the health of the industry, possible barriers to competition, and the industry's collaborations with foreign nations.

The survey was mailed last summer to roughly 3,000 firms culled from three industry mailing lists. The Biotechnology Industry Organization (BIO), the industry's leading trade association with more than 1,000 members worldwide, has played a key role in the survey's development. BIO has been keeping tabs on the state of the industry for a while. The group hired Ernst & Young to conduct a survey to determine the number of jobs created, the amount of money spent on research, and the collective taxes paid to the federal government by the biotech industry between 1993 and 1999. In addition, Burrill and Company, a venture capital firm focused on the life sciences, publishes an annual report on the biotech industry as a whole.

Oddly, one of the most fundamental questions had not been entirely resolved by the time the government survey hit the mail: the question of what, precisely, counts as "biotechnology." The minutes from one Commerce Department meeting suggest that the Departments of Commerce and Defense could not agree on a definition. (BIO's definition of biotechnology: "the use of biological processes to solve problems or make useful products.")

The first part of the survey asks firms if their business is that of "human health"—specifically, whether the company "utilizes human cells, genes, proteins, enzymes, antibodies, and/or other biological entities and components to prevent, diagnose, and fight infections and other diseases, as well as to correct genetic disorders." The second part inquires into actual "biotechnology activities"—whether DNA-based (e.g., bioinformatics, genomics, genetic engineering), biochemistry-specific (vaccines, drug design, microbiology), bioprocessing-related (cell, tissue, or embryo manipulation), or environmental.

The responses from each company will not be publicly released. Instead, the Commerce Department plans to release a summary report in August 2003—sure to become required reading for ambitious investors and regulators alike.