

five years, are aimed at regulating the body's production of tumor factors and other proteins implicated in cancer. All three cancer therapies are under development at Cetus Immune in Palo Alto, Calif.

Fildes has given up searching for an industrial sponsor to replace Standard Oil of California, which last year unilaterally withdrew its support of a proposed \$15 million pilot plant using immobilized enzymes to convert olefins to their oxides and glycols, producing glucose as a coreaction. Nabisco Brands reportedly has taken an interest in the immobilized enzyme technology Cetus developed, a sign that the entire project may not have been fruitless. But other food, chemical, and energy projects are "essentially mothballed," Fildes says; under 10 percent of the budget now is devoted to "maintaining a foothold in those areas."

One of Fildes' more controversial moves was to end the new ventures department. Most of the 40 people laid off last fall came from this department, which annually spent about \$6 million. Rather than focusing on product development, the department was a basic research lab that, one scientist says, "was the most attractive part of Cetus. It helped bring in scientists who wanted to work in industry but didn't want to give up the academic milieu altogether."

Fildes also has made it clear that nonhealth projects must obtain outside support or they will be axed. Cetus' only nonhealth subsidiary, its agricultural branch located in Madison, Wisc., may see its R&D budget shrink unless it finds additional outside funds. The Wisconsin Alumni Foundation has awarded Cetus Madison a \$3 million research grant, but the subsidiary still claims about \$3.5 million of the Cetus budget annually. National Distillers and Chemical Corp. renewed its contract for research on ethanol production, worth about \$2.4 million a year, but according to a Cetus source, that is viewed by Fildes as a satellite project not central to the firm's success.

Through layoffs and attrition, Cetus now employs about 480 people, of whom 280 are bench scientists. Fildes says the size of the scientific workforce will remain static, but he is in the process of filling 15 senior positions to beef up the business end. Fildes plans to hire people "with experience developing drugs and taking them to market," and is said to be drawing heavily on former colleagues at Bristol Myers.

Fildes reportedly has asked at least one science director to report to a nonscientific vice president for commercial development. He also is said to be seeking commercially-oriented

R&D directors for the Cetus subsidiaries, all of which are presently overseen by senior scientist consultants. Some of these, unhappy with the prospect of reporting to a nontechnical superior, are planning to depart, according to one source there. But Fildes says he believes the scientific staff is relieved to see a new focus established. "There's been a tremendous positive response. The staff here want us to find markets for their research," he explains.

Wall Street analysts are not bullish on Cetus, despite the market-driven business plan Fildes instituted. After raising \$100 million in its initial public offering, one analyst with a major Wall Street firm says, Cetus "sat on that nest egg for two years. I think they have enough capital now. And they haven't shown they can do exciting things with all that money." Another analyst agrees that the financial community hasn't forgiven Cetus for not spending the \$100 million. "Investors don't buy stock so the company can live off the interest. They expect their money to be put to good use," he says. Cetus' stock may be reflecting those feelings; it has been selling for about a third the price of Genentech's. —Paula E. Dwyer

**"NATURE" MEETING**

## THIRTY YEARS OF DNA

CAMBRIDGE, U.K.—Luminaries in molecular biology research gathered here in mid-April to celebrate the thirtieth anniversary of James Watson and Francis Crick's hypothesis that DNA's structure was a double helix.

Speakers reviewed the field's progress since *Nature*, the meeting's sponsor, published Watson and Crick's seminal paper. They included Walter Bodmer, Y. W. Kan, Charles Weissmann, Howard Temin, Robert Williamson, Rudolph Jaenisch, David Hogness, P. Borst, Leroy Hood, Walter Gilbert, Mark Ptashne, J. Wang, Aaron Klug, Sydney Brenner, J. J. Jackson, K. Nasmyth, and H. Pelham. Watson, appropriately, gave the keynote address. Crick was unable to attend, but will be present at a similar party *Nature* is giving on the other side of the Atlantic, scheduled for Boston Sept. 19–21.

Although most of the speakers have commercial ties, their talks focused on basic research rather than applications. Watson, however, suggested that a Nobel Prize should go to Herbert Boyer and Stanley Cohen for making recombinant DNA practical. —Marcel Faber

**REGULATION**

## RAC GROUP TO WATCH AG TESTS

BETHESDA, MD—The Recombinant DNA Advisory Committee has backed off from giving local institutional biosafety committees (IBCs) complete authority to approve field experiments for genetically-engineered plants. Turning down the recommendation of its Working Group on Revision of the Guidelines at its last meeting April 11, RAC decided instead to share that responsibility between IBCs and its own Working Group on Plants and Associated Microorganisms.

Scientists who want to experiment with growing genetically engineered plants out-of-doors will have to explain their plans not only to their local IBCs, but also to the RAC Working Group, which will be reconstituted with a broader membership to include outside, ad hoc members, especially those with expertise on plant microorganisms.

As a result of its decision, RAC temporarily shelved the Cetus Madison proposal that also had been scheduled for consideration at the April meeting. The Wisconsin firm wants to field test new kinds of wheat, cotton, soybeans, corn, tobacco, tomatoes, potatoes, and rice, all made with recombinant DNA techniques. This would mark the first time a commercial organization released organisms constructed with recombinant DNA into the environment.

Instead, the new Working Group will make a decision on Cetus's proposal. Winston Brill, vice president and director of research at Cetus Madison, expects action soon enough so that the company can carry out its tests this growing season. Because its proposal will now be examined in secrecy by the smaller group rather than in an open meeting of the full RAC, Cetus can submit a more detailed plan than it did originally, Brill says. "We shouldn't have any problems getting it approved," notes Brill, a RAC member whose term expires this year. —Tabitha M. Powledge

## KEYSTONE CROPS

KEYSTONE, CO—Agrigenetics scientists announced expression of transferred foreign plant genes in plant cells at a meeting here late in April. At the same meeting, Monsanto scientists reported genetically engineering entire plants by transferring bacterial genes to plant cells, then regenerating whole plants from the cells. BIO/TECHNOLOGY will report on the meeting in July.