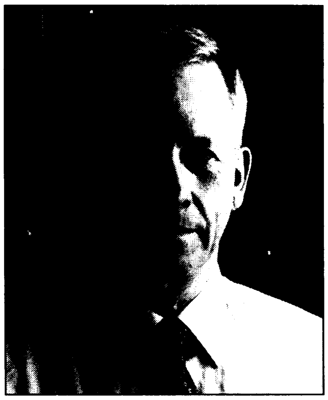
more on a market focus that included several products from the start: recombinant vaccines and drugs for treating infectious diseases. When Chiron started in 1981, vaccines had fallen out of favor for industry startups. But the Chiron team recognized that recombinant vaccines mimicking the structure of infectious agents had untapped potential. That work has lead to profitable products, including the first recombinant vaccine for hepatitis B, and a recombinant human insulin. It has also prompted a half-dozen joint ventures, including one with CIBA-GEIGY of Switzerland to develop vaccines for herpes, AIDS, hepatitis C, malaria, and cytomegalovirus.



Wins and losses. *Bill Rutter of Chiron* (left); *Ron Cape of Cetus.*

Not that it has all been smooth sailing: Chiron has had its failures, such as a dismal bid to enter a partnership with Connaught BioSciences Ltd., Canada's premier biotech firm, and disappointing clinical trials on super oxide dismutase (to repair free oxygen radical damage after heart attacks) and epidermal growth factor. But the company survived because it had a balanced business strategy—it didn't put so much emphasis on one flagship drug, and it built up a research machine that pumped out a steady stream of potential products. That strategy has paid off handsomely: By last year, Chiron became one of the first biotech firms to turn a profit for its investors—\$6.8 million in earnings on revenues of \$78.5 million.

So it would seem that the moral of the tale is that balance is better than a tight focus, and Monday-morning quarterbacks fault Cetus for not taking that route. But Robert Fildes is impatient with what he calls "20/20 hindsight." He argues heatedly that when he arrived at Cetus, there was only one product besides IL-2 worth backing (and it was developed in a joint venture). Moreover, Fildes points out that in biotech most winners have succeeded by focusing on one major product and bringing it to market as quickly as possible. In support of his argument, he points to Amgen's big push on EPO, Biogen's on interferon, and Genentech's on TPA.

The difference between Cetus and those winning ventures, he insists, is that "some companies got dealt different cards than others from their research. No one knew in the early '80s what any of these products would do." Furthermore, he argues that if Cetus had ridden out the storm, IL-2 would have paid off. "I personally don't see why they had to turn around and sell the company," says Fildes. "It's like being in a marathon, and throwing it in on the 23rd mile."

Insiders won't give Fildes this way out, though. Even if the IL-2 gambit had succeeded, some say, Cetus would have had problems. Researchers say that in order to feed his pet project—making and selling IL-2—he cut investment on research. In the resulting climate, Cetus hemorrhaged its top scientific staff: Since 1987 the company has lost its directors of research, development, clinical trials, regulatory affairs, and molecular biology.

Meanwhile, Chiron's success allowed it to step forward as Cetus faltered and snap up its larger competitor. What Chiron gets out of the new combination is a manufacturing facility and sales force it lacked, as well as \$300 million in cash from the sale of PCR rights for human diagnostics to Hoffmann-La Roche. (The PCR division of Cetus will move to Roche Diagnostics in Alameda, California, where the dissemination of PCR should be similar to what it was in recent years.) Chiron is also acquiring a newly trimmed scientific and development staff from Cetus, whose research into oncology drugs complements Chiron's work to boost the immune system.

While Cetus co-founder Cape says he's saddened to see his firm come to an end, he's pleased about the fact that the new company could become what he calls a "blockbuster" of biotech. Analysts agree. "You put the R&D management of Chiron with the science of Cetus, and all that cash, and it's clear this combined company is going to be a substantial player in the industry," says Lacob. ■ ANN GIBBONS

Kennedy Resigns From Stanford

Concerned at the extent to which he has become a symbol of academic extravagance at taxpayer expense, Stanford University president Donald Kennedy announced last Monday that he will resign next August. "It is very difficult for a person identified with a problem to be the spokesman for its solution," he wrote to the university's board of trustees. Kennedy's departure is steeped in irony: One of his major achievements in his 10-year tenure was in raising private funds, yet he has been brought down by a scandal over the accounting of federal money intended to reimburse the university for the indirect costs of its research.

By announcing his departure a year in advance, Kennedy has given the university time to mount a nationwide search for a successor. In addition, he wrote, the coming year will give him an opportunity to begin "the difficult work of repair" to Stanford's reputation.

That work apparently began last week, when Stanford revealed a series of accounting reforms designed to avoid the kind of embarrassing errors and improper billing that drew the attention of Representative John Dingell (D-MI) and his investigators earlier this year. Although the changes may go some way toward appeasing Stanford's critics on the Hill, a 5-member panel of luminaries established to advise Kennedy on the university's indirect cost mess has argued that they go too far.

The most significant changes will involve a system for setting aside "unallowable" costs as they are incurred, rather than permitting them to flow into accounts charged to the federal government as indirect costs. The university also intends to flag specific departmental accounts with large numbers of unallowable costs for special scrutiny, establish a code of ethics, and write a series of comprehensive manuals to educate its employees. In addition, Stanford has asked Arthur Andersen & Co, the accounting firm that recommended these changes, to conduct an audit of the university's overhead accounts from 1983 to the present—years for which Stanford and the federal government have yet to agree on Stanford's indirect cost charges.

The university's special advisory panel, whose members include Carnegie Institution president Maxine Singer and former Georgetown University president Timothy Healy, was less than enthusiastic about these steps, complaining to the board of trustees that the new system could lead to an "excessive focus" on accounting details and may be "far too expensive for the value sought." Kennedy, meanwhile, wrote the board that he plans to take a sabbatical and then return as a faculty member to pursue environmental studies. ■ DAVID P. HAMILTON