

The Man Who Invented the Biotech Business

There is a poignant irony in the death last week of Robert Swanson, a co-founder of Genentech, from brain cancer at age 52. A quarter century ago he had a singular role in the formation of the biotech industry. Today with new medical treatments coming at a faster pace than any other time in human history, one of them will come too late to help him.

In January 1976, Swanson, then a 28-year-old venture capitalist, drove up from

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By Frederick J. Dorey

Silicon Valley to the University of California at San Francisco. He had requested 10 minutes with Herbert Boyer, a biochemist and one of the inventors of recombinant DNA. The discussion adjourned to a local pub for several hours, and Genentech was born.

It is not too much to say that this meeting produced a new structure for science-driven business and fundamentally changed the relationship between business and America's research universities. Before Swanson made that trip, the best university research scientists would not consider joining industry, for their academic careers would be ruined if they did. Universities,

with their basic-research laboratories, and corporations, with their focus on product-driven development, passed like ships in the night. While universities published research papers, secrecy was the rule in industrial research. And research scientists who considered joining companies knew they would have to conform to a rigid corporate culture.

In the mid-1970s, a structure to help new companies commercialize technology was evolving in Silicon Valley. But the small community of venture-capital firms was focused entirely on electronics. At about the same time, and in the same region, Mr. Boyer at UCSF and Stanley Cohen at Stanford had succeeded in moving a gene from one organism to function successfully in a different kind of organism. Recombinant DNA was the province of a small group of academic scientists and the subject of a lively ethical debate, with no commercial interest whatever. A lone university administrator persuaded the scientists to file a patent application.

Swanson, with degrees in chemistry and management from the Massachusetts Institute of Technology, wondered whether new organisms could be created to help discover and produce pharmaceutical proteins. The answer seemed to be yes—given a lot of hard work, money and very good science. Swanson would have to start a company, hire the best research talent and win over skeptical investors. But this was the '70s, and gene splicing was not electronics. The most creative researchers had little interest in working for business, and there was no model for a start-up company based on biology. Research and product approvals would take years. Swanson would have to invent an entirely new kind of company.

Swanson became CEO of Genentech and set out to create an organization that the best scientists would want to join. The quality of their science was paramount; they could publish as much, and as often, as possible. Genentech developed its own products and retained the commercial rights. Unlike the pharmaceutical industry, Genentech protected those rights through patents, not secrecy. Swanson pioneered the use of research-and-develop-

ment partnerships to help fund the research. Through stock options the scientists would share in the success of their work.

Swanson had an unpretentious style that fit perfectly with free-wheeling scientists. He had no executive parking spot. Recruits who were impressed that the CEO had offered to drive them to lunch found themselves waiting at the company door while Swanson hiked to the far end of the parking lot to get his car. Genentech's Friday afternoon parties would have made a pharmaceutical executive blanch, but they delighted the employees.

Within a few years, Genentech had succeeded dramatically. A flood of new companies followed its path. Swanson's eye for talent produced a remarkable alumni group whose members now lead many of the next generation of biotech companies.

Investors and the public were transfixed. Fifteen years before the Internet frenzy began, Genentech's IPO in October 1980 was the most successful in history. The stock opened at \$35 a share and reached as high as \$88 on the first day of trading.

Swanson eventually stepped back from active management of the company. But he had one more dramatic example to set for the biotech industry. Pharmaceutical product development takes enormous resources and years of effort. Ultimately it is beyond the sole resources of even the most successful biotech company. In 1990 Genentech stunned the industry by announcing that Roche pharmaceuticals would buy a controlling interest for \$2.1 billion; some called it a sellout. Employees worried that Genentech's distinctive culture would disappear. But it needed the capital to fund development, and Genentech continues today as a remarkable source of scientific innovation.

Swanson stayed on as chairman until he resigned from the Genentech board in 1996. He worked with his own venture capital fund and served as a director of a number of private companies. He stayed out of the limelight, turning down most



David Smith

Robert Swanson
Founded Genentech

speaking invitations. He was diagnosed with a brain tumor last year but continued to be active in business until last summer. He is survived by his wife and two daughters.

In the quadrangle of the new research complex at Genentech, there is a life-size metal sculpture of two men sitting at a table, each with a beer. One is leaning forward enthusiastically making his point. The other is Herb Boyer, the counterculture university scientist in denim vest and bell-bottom jeans. He is leaning back, skeptical but intrigued. He is on the verge of deciding to cast his fate with the young venture capitalist. It is a fitting memorial to the moment of the founding of Genentech, the biotech industry and a new approach to the business of science.

Mr. Dorey, a lawyer in Palo Alto, Calif., is former president of the Bay Area Bioscience Center.

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Notable & Quotable

Former Defense Secretary James Schlesinger in the Hudson Institute's American Outlook, Fall 1999:

My fear is that our country has become so complacent about its preeminent [international] position that we see it as a natural right. To preserve America's conventional military superiority, we will have to do much more to sustain our military strength. The United States now spends less than 3 percent of its gross domestic product on defense. The armed forces' manpower continues to shrink. Our military equipment is depreciating by \$100 billion a year, but we have been spending only some \$45 billion annually on procurement. This year that figure will rise to \$50 billion, but around 2010 when the equipment acquired during the Reagan buildup begins to expire, we will have to spend significantly more or lose our decisive conventional edge. Will we be willing to increase defense expenditures while facing much higher costs from Social Security, Medicare, and the like? It will be hard to persuade people to raise defense expenditures enough to replace the equipment that is aging today.