the other major point in Wirth's package: breaking off Long Lines (AT&T's long-distance network, which holds a virtual monopoly on interstate communications) from the more competitive divisions of the company. AT&T would thus retain Long Lines, Western Electric (which manufactures communications equipment), American Bell (the new subsidiary entering the computer market), and Bell Labs without restrictions on how research and development funds are allocated.

Stephen Budiansky

US biotechnology

Re-entry plans

Washington

E.F. Hutton, the large US financial company, is making its second entry into the potentially lucrative field of founding and backing fledgling biotechnology companies. In September, Hutton will begin offering investors limited partnerships in California Biotechnology Inc., a new company organized around the talents of three prominent university researchers. Hutton has already grossed $5.4 million in startup capital for the firm, which is now building a laboratory in Mountain View, in the San Francisco area.

Cal Biotech, as the firm is called, will have as director of research Professor Brian J. McCarthy on leave of absence from his position at the University of California, at Irvine. John Baxter of the University of California at San Francisco, has agreed to consult exclusively for Cal Biotech, although he will retain his professorship at the university. The third star is to be John Shine of Australia National University at Canberra. Shine will also consult exclusively for Cal Biotech, and work for the company under contract at his lab in Canberra, according to Hutton official Zsolt Harsanyi.

The company plans to use DNA techniques to develop pharmaceutical drugs, which could be tested and marketed by major pharmaceutical firms. Cal Biotech's role will be limited to development and ownership of the drugs themselves. Initially, the group plans to pursue development of human pharmaceuticals including those useful for cardiovascular diseases and anti-inflammatory purposes. However, Baxter and Shine have developed a way to produce beta-endorphin, the patent for which is held by the University of California. Baxter's laboratory has also cloned human and bovine growth hormone gene, so the company's work could proceed in those areas as well.

"What makes our company different from other biotechnology companies" says the firm's president Alfred G. Scheid, a long term consultant and former Hutton employee who makes rather a speciality of founding new companies, "is the combination of top scientists and access to a continuing flow of capital." Besides sponsoring the company financially, Hutton has also lent one of its executive vice presidents, William G. Baker, to be chairman of the board. Hutton itself invested an undisclosed amount as part of the $5.4 million fundraising.

Harsanyi says that come September, investors can put up a minimum of $5,000 to become limited partners in Cal Biotech. Using a little-noted provision in the tax law (that has been available for research and developments partnerships since the mid-1970s), they will be able to deduct perhaps as much as 99 per cent of the money they invest if the company spends the money in that year. Thus, the attractiveness of the investment depends on Cal Biotech's financial planning, which may explain why Hutton is taking such a deep interest in its management. Besides the tax writeoff, investors will receive a share of any instant royalties and profits the company earns from drugs that are sold, which could start as early as 1988, Harsanyi says. The company itself will be the general partner, splitting profits and royalties with the group of limited partners.

The approach of forming a company around a group of researchers and limiting its scope to their research is a major switch for E.F. Hutton following its failure with an alternative approach. In February 1981 Hutton raised $40 million to start DNA Science, a company planned to sponsor biotechnology research in many institutions around the world. Most of the initial investment was to go to the Weizmann Institute in Rehovot, Israel, to support work directed by Christian B. Anfinsen who had moved there after retiring from his post at the US National Institutes of Health. Baxter's laboratory in California was also due for support.

Research funding by DNA Science was mixed up with possible marketing rights granted to two major firms, and the whole cabbodle was to be managed by a businessman, E. Russell Eggers, with two Hutton officials, Harsanyi and Nelson Schneider, as vice presidents. But the structure of the company was too unwieldy and the 1981 tax law cancelled out some of the expected tax benefits from investment. So on 4 August 1981, the investors got their money back.

The lesson of DNA Science, Harsanyi says, is that investors in biotechnology are attracted by key people, such as Anfinsen and Baxter. The most promising approach, therefore, is to structure a company around these people, not expecting them to do management and marketing but assuring their access to capital for research and development. Whether Cal Biotech can develop a group of important products, to see them through the hurdles of trials and testing, and bring its investors golden returns, remains to be seen.

Deborah Shapley

Biotechnology centre

Links between industry and biotechnology research are thriving at the University of Leicester. Four companies are putting up approximately £1 million between them to establish a new biotechnology centre at the university. And the Science and Engineering Research Council (SERC) has promised the new centre £180,000 for capital equipment.

Industry's interest in Leicester is particularly timely. The University Grants Committee (UGC) recently awarded the university £50,000 of its grant earmarked for biotechnology to create three new lectureships. The university is now hoping to persuade the grants committee that one of those posts, for a yeast specialist, should be created within the new biocentre. The others are reserved for a plant biotechnologist and a mammalian geneticist within the university proper.

The companies prepared to put their money into research at Leicester are Whitbread, the brewers, Gallaher, the tobacco company, Dalgety–Spillers, the food manufactures and John Brown Engineers and Constructors whose main claim to biotechnical fame is the construction of the Pruteen plant for ICI. They have guaranteed support to the new centre for five years and have already agreed a programme of research. The centre will be concerned primarily with recombinant DNA technology, although questions of scale-up may be considered later. The research programme will consider plasmid DNA regulation and protein secretion in yeasts and the analysis and structure of genes in higher plants.

Money from the four companies should be sufficient to keep about eight researchers employed for five years, but the centre will also be trying to build up a sound contract research business. Patents resulting from work carried out under the core programme will be shared between the four companies and the university. The share of revenue will depend on how the patent is licensed. Ultimately, the centre hopes to build up a contract research business, the profits from which will be ploughed back into the centre. Precisely how much the university will earn from its association with the centre remains uncertain.

Even if the university has little to gain financially, it is intended to benefit from the small teaching commitment that the centre will take on. Training is also to be provided for employees seconded from industry. Initially, the centre will be housed in a suite of laboratories in the university's pre-clinical medical sciences building (for which it may pay no rent), but it may later build its own accommodation if cash can be raised.

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