93/06-Of Betting on Biotech

By Peter Lynch

The recent collapse of the biotech group got me interested, as collapses almost always do. This isn't like the collapse of the saddle-making group, which never had a chance of coming back after the automobile was invented. Biogenetics has established itself as an industry of the future, as well as the bust of the present.

Knowing next to nothing about what goes on inside a biotech lab, I called a number of analysts and fund managers who specialize in this field. Here's the tantalizing part, as related to me by Stuart Weisbrod, a biotech analyst at Merrill Lynch. If, in early 1986, any of us had been smart enough to buy equal amounts of < wam-co NYSE:GNE>Genentech, Amgen, < wam-co NASD:CHIR>Chiron, Cetus (later acquired by Chiron), < wam-co NASD:BGEN>Biogen and Genex, we would have made 40% annually to the end of 1992, turning a $10,000 investment into $105,414 in spite of the fact that Genex went to zero. This is the sort of result that demands some attention.

Thirteen years ago, when the first of these companies began appearing on the stock exchanges, I remember hearing that all it took to start one was 100 PhDs, 101 microscopes, and $100 million in cash. The 101st microscope, I guess, was a spare. Or maybe there were 25 PhDs with 26 microscopes, but the story was always the same: The brilliant scientists were bound to hit upon a brilliant idea that could be turned into a useful product, from which the shareholders would someday make a tidy profit.

Speaking of tidy profits, the venture capitalists who put up the money to hire the PhDs and install the microscopes could "cash out" by selling all or part of their shares in an initial public offering. On Wall Street, this is called "harvesting the seed capital."

The original flurry of biotech issues I ignored, on the theory that mysterious ventures with no earnings should be avoided. I did buy some of the Genentech IPO, whose stock then rose from $35 to $89 on the first day of trading on October 14, 1980. This was a remarkable event, and a signal of exciting prospects to come. However, the biotech group accounted for less than .5% of Magellan's portfolio throughout the time I ran the fund.

A decade later, I'm hearing that the science of biotech has advanced rapidly. The pace of the research has quickened and the scientists are making more genetic breakthroughs than could have been imagined in 1980. Lately, they've been coming up with potential cures for many serious diseases.

Another thing that has advanced rapidly is the number of biotech companies whose shares are traded publicly. Instead of the handful of companies with the cash, the PhDs, and the microscopes that existed in 1980, there are now about 225, many added in the latest wave of public offerings that ended with the recent biotech slump.

Herein lies the problem, and the reason for the selloff. The odds are slim (I figure, 1,000 to 1 or so) that a great idea from one of the microscopes will ever become a saleable product. With all the companies

now involved in the business of developing new drugs, predicting which company's drug will be approved by the FDA is no easier than picking which turtle egg from a mess of turtle eggs will become a turtle and make it to the sea.

To usher a would-be saleable product through all three of the FDA's mandated trials can take from 5 to 15 years and cost from $100 million to $500 million. So far, the biotech group has been far more adept at inventing things than at surviving the dreaded three Phases, which are given roman numerals, like the Super Bowl.

In Phase I, the new substance is tested on from 20 to 100 patients to determine whether it's safe to use and isn't going to make people sicker than they already are. Then there's Phase II, involving between 50 and 250 patients, to show if the substance really works. After that comes the hard part, Phase III, the multi-center trials with up to several thousand patients, to show that the substance works in different surroundings.

What's been happening lately is that the new drug makes it through Phases I and II, and investors bid up the stock in anticipation of the final FDA approval (it's not uncommon for a biotech stock to double in value between one phase and another), and then the company flunks Phase III.

Earlier this year, Synergen flunked Phase III with its drug Antril, which treats septic shock, and the stock lost 68% of its value in one day--a fate that had previously befallen two other companies, XOMA and < wam-co NASD:CNTO>Centocor, that had developed similar drugs. It was once reported that "knowledgeable people" thought Centocor's Centoxin had a 90% to 95% chance of passing Phase III, which goes to show that a lot of knowledge can be a dangerous thing in the biotech field.

Moreover, when one biotech company fails a big test, the others are sold off in sympathy, as they were after Synergen's drug flopped last February. So many drugs have failed one test or another in recent years that between the end of 1991 and February 1993, the market value of the entire industry declined from about $41 billion to $26 billion, which reminds us how tenuous these valuations can be, based as they are on hopes and dreams, as opposed to earnings.

That's another problem: The earnings in biotech are as scarce as hen's teeth, which scientists have yet to invent. To date, only Genentech and Amgen have what could be called a tradition of meaningful earnings, although even Genentech's earnings have been highly variable, and Amgen didn't start making serious money until 1991. Others haven't fared as well. Genzyme earned a little something in 1991, as did Biogen in 1992, and Chiron, reportedly, is about to break even.

This, more or less, sums up the proceeds from the entire biotech group. Only about a dozen companies out of 225 have had products approved, and more than 90% of the companies in the biotech group are stuck in the "pre-revenue" stage, which is the new euphemism for not earning a living. The firms that can't make ends meet usually are absorbed into larger companies: That has happened to something like 75 companies since July 1990.

Apparently, the experts are as much in the dark about how to pick the next Genentech from among the many potential Genexes as the average person with a degree in English lit. I asked Linda Miller, an analyst at Paine Webber, if the PhDs with the microscopes have an advantage in choosing these stocks. She thinks not.

According to an article I read in Barron's, insiders at the Amgen labs, where ten molecules were being tested, were convinced that the least promising among them was the one that later became Epogen, Amgen's half- billion-dollar drug. Likewise, a product called Neupogen came out of nowhere and is now Amgen's second half-billion-dollar drug. So even the experts have trouble predicting these things.

Moreover, the success of an Epogen or a Neupogen depends on many factors outside the realm of science, such as what happens in the legal department (patent disputes are common in the industry) and what happens at the FDA. Many of the diseases that biotech companies are now trying to cure are difficult to test. It's hard to quantify how much better someone feels after taking a new genetically-produced arthritis medicine in Phase III.

Mr. Weisbrod's investment advice is to ignore the companies with the most exciting products, and buy the ones whose drugs have the best chance of getting approved. He saw the potential in Amgen quite early, because Neupogen did one simple thing that was easy to measure: It raised the white blood-cell count.

In the clinical trials, all Amgen had to prove was that people's white blood-cell count goes up after they take Neupogen. Synergen, on the other hand, had to prove that Antril helps people cope with septic shock, a more subjective exercise.

Every biotech analyst has a favorite method for separating the potential winners from the losers. Some concentrate on the cash, and pick companies with enough of a bankroll to survive several years at their current level of spending, which is called the "burn rate." Others look at the "M Score," which compares the level of R&D; spending with the total market value of the company. Others look for the number of products in the pipeline, or in Phases II and III. At present, these are only attempts to fathom the unfathomable.

The three most important lessons I've learned from my conversations are these: (1) Don't buy a biotech company because it announces an exciting new drug that hasn't yet been tested; (2) Don't assume that because an exciting drug has survived the first two trials, it's a shoo-in for Phase III; And (3) the investor's edge I'm always talking about often doesn't work in biotech. Investors who ignore these rules may end up getting nothing for something, as the shareholders of Genex already have.

Biotech reminds me of computers in the 1960s--the prospects in general are spectacular, but most of the prospectors are likely to fail. What a waste it is to understand the biotech potential, then put your money on the wrong company and lose it. Are there sensible ways to reduce the risks? That's the topic for my next column.

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