

• Ultramed (La Jolla, CA), a medical company commercializing microsurgical appliances.

Bunting adds that the Biotechnology Venture Fund, which is actually quite similar in structure and mission to BIL, hopes to invest soon in a privately held U.K. affiliate of a U.S. company working in the cardiovascular area.

Major U.S. corporations are also sponsoring biotech investment funds, with two of the most recent entries coming from E. R. Squibb (Princeton, NJ) and Westinghouse Credit Corp. (Pittsburgh, PA). Robert Riley left the consulting firm of Arthur D. Little (Cambridge, MA) last summer to become director of venture investments at Squibb and to head up the \$15-million Squibb Biotechnology Venture Capital Fund. He explains that its focus will be on molecular biology in healthcare. The dual goals are return on investment and attaining strategic advantage for Squibb by eventually forming relationships with portfolio firms. Such arrangements could include licensing, product development, distribution, or even Squibb's acting as an advisor. Riley stresses that the recent dismantling of Squibb's plan to pay \$40 million for five percent of Cetus Corp. (Emeryville, CA) in no way hurts the fund or indicates a decrease in Squibb's commitment to biotech.

Westinghouse Credit Corp., the money-managing component of Westinghouse Electric, had a somewhat different goal when it became the sole investor last spring in the \$15-million MedCorp Development Fund, according to Jay Glass, who manages the fund from Newport Beach, CA. With the entire portfolio focusing on healthcare—and approximately one-third going to biotech—Westinghouse is seeking nothing more than attractive return-on-investment, rather than any sort of window on technology.

On the public side, the little-known, two-and-one-half-year-old, Genetics Fund (previously called the Genetics Unique Fund) run by Ruggles & Associates (Boston, MA) represents what could be the purest play in public biotech stocks. Currently set up as a group trust available only to Ruggles' money management clients, the \$8-million portfolio found itself badly burned by the stock market melt-down that shook Wall Street in the middle of October. In fact, the situation is so dire that Ruggles' new management is seriously considering liquidation of the Genetics Unique Fund.

—Arthur Klausner

## COMMENTARY

### KEEPING BIOTECH IN PERSPECTIVE

The fabulous techniques of molecular biology are going to change the face of medicine, agriculture, and virtually every facet of the human existence."

We've all heard words like this. In fact, many of us have probably spouted similarly enthusiastic prophecies ourselves. And true though such statements may be, biotechnology is no stand-alone innovation. In order to be implemented, this technological wizardry must be integrated into already established practices, beliefs, and needs. It is merely a set of tools, rather than the answer to problems.

This often overlooked theme was driven home at several recent meetings of the biotech faithful. One example was the annual scientific advisory board conference of DNA Plant Technology Corp. (Cinnaminson, NJ). At this September meeting, eminent scientists from around the world convened to discuss "value-added genetics versus supply-side genetics." The take-home message: Although biotech has allowed many of the intricacies of plant genetics to be teased out into the open, traditional plant breeders will be the ones to place these advances in farmers' hands. "There is a tremendous wealth of variety out there that we can use," stressed Edward Tigchelaar of Purdue University (Lafayette, IN)—including characteristics like appearance, texture, flavor, nutritive value, skin toughness, and juiciness. He noted that traditional techniques were used to develop today's impressive strains of corn, wheat, and rice; similar advances are probably still possible with the so-called minor crops that haven't received much attention yet.

Similarly, DuPont (Wilmington, DE) was trying to mesh biotech with traditional agriculture when it invited close to 50 editors and broadcasters from the agricultural and biotech press to a three-day media event, "Inside DuPont: Answers to Issues." Described by DuPont director of biotechnology John Hardinger as "our coming out party" for biotechnology, the meeting strove to reach farmers by educating the media about new advances. "We want to be the best at understanding and responding to our customers' needs," summarized Jack Kroll, DuPont's group vice president for agricultural products.

That genetic engineering—sophisticated as it may be—is not the only means to create new drugs and anti-tumor compounds was made abundantly clear at the Society for Industrial Microbiology's annual meeting in August. In fact, biotechnology may be *too* sophisticated. As Arthur Patchett (Merck, Sharp & Dohme Research Laboratories, Rahway, NJ) said, "Biochemists are designing targets [for potential drugs] faster than they can be sufficiently understood at a molecular level to permit chemical design. Actually, despite the much-flaunted promise of computers and molecular modeling, there have been very few design successes."

Microorganisms are pretty fair engineers and chemists themselves: A world of interesting and important compounds still remains to be isolated from natural sources. Synthetic chemists at Merck had barely finished congratulating themselves on their success in creating an angiotensin converting enzyme (ACE) inhibitor (to lower blood pressure) when another research group reported exactly the same structure—isolated from a microbial source. And the National Cancer Institute, in its search for new anti-tumor drugs, has initiated an extensive screening program (as have several pharmaceutical companies) for natural products from microbial and marine sources. The hope is that new types of compounds will be more effective against cancer than the few current anti-tumor agents, which tend to be effective only on the rarer tumors.

According to Patchett, "The synthetic chemist is just one jump ahead of natural products screening." And where does that put the molecular biologist? A scientist from a leading biotech company summed up his feelings about the limits of the new technology in today's harsh language of dollars and cents: If I were in charge of budgeting research dollars, and I had to make a choice between screening natural organisms for something new and exciting versus doing genetic engineering, I would go with the screening.

—Jennifer Van Brunt and Arthur Klausner