

COMPETITION IN RECOMBINANT hGH; PURCHASES

Another hGH approved. Genentech (South San Francisco, CA) is no longer alone in the recombinant human growth hormone (hGH) business, now that the U.S. Food and Drug Administration has approved "Humatrope" from Eli Lilly (Indianapolis, IN). Lilly's product differs from Genentech's "Protropin" in that it lacks one methionine residue and thereby has the same amino acid sequence as the natural protein. FDA has granted orphan drug status to both products, but Genentech believes the agency may have violated the Orphan Drug Act in bestowing this status to Lilly's hGH: Thus Genentech is suing to keep Lilly out of the marketplace; the biotech firm is also seeking to make FDA extend Genentech's orphan drug status to cover its own methionine-less hGH. The outcome will be important both to Genentech, which registered over \$40 million in sales of Protropin last year, and to the other developers of recombinant hGH.

CARB turnover. Kevin Ulmer has resigned as director of the Center for Advanced Research in Biotechnology (CARB, Shady Grove, MD). Tom Poulos, who is still part-time director for protein engineering at Genex, became CARB's acting director at the beginning of April.

More purchases. Biotech companies continue to flex their financial muscles by buying businesses that could prove important to their strategic goals:

- LifeCore Biomedical (Minneapolis, MN) completed its acquisition by merger of OrthoMatrix (Dublin, CA), a medical device company.
- Monoclonal Antibodies Inc. (Mountain View, CA) has agreed in principle to pay \$10 million in stock for Genesis Labs (Minneapolis, MN), a medical diagnostic developer.
- Plant Genetics (Davis, CA) expanded its alfalfa program by purchasing Lovelock Seed Co.'s seed distribution business.
- Advanced Biotechnologies (Silver Spring, MD) acquired the microanalysis services division of Gentrionix Laboratories (Rockville, MD).
- Alfa-Laval AB (Tumba, Sweden) agreed to pay about \$51 million for the industrial systems business of

Cooper Technicon (Tarrytown, NY).

- Varian Associates (Palo Alto, CA) has acquired Analytichem International (Harbor City, CA), a supplier of bonded phase sample preparation products. Certain of Analytichem's biotech projects, however, were not included in the purchase and form the basis of a new firm called BioAffinity Systems (Torrance, CA).

Financing. At long last, Genex Corp. (Gaithersburg, MD) has secured a \$4-million line of credit from several venture capital firms—including Plant Resources Venture Fund II, Morgenthaler Venture Partners II, and several accounts managed by Citibank—in return for warrants to purchase 1.67 million shares of Genex stock at \$.60 each. Genex also plans to make \$6–8 million-worth of preferred stock available to its shareholders.

Other firms taking advantage of a variety of channels to raise money include Crop Genetics International (Hanover, MD), with a planned initial public offering of 1.25 million shares at \$14–16 each; Biotherapeutics (Franklin, TN), with \$12.3 million in a convertible preferred stock offering; Genentech, with \$100 million in 5½ percent Eurobonds due in 2002; and Biotech Capital Corp. (New York, NY), with 340 units at \$50,000 each.

Drug delivery. Ciba-Geigy Pharmaceuticals (Horsham, U.K.) must be taking drug delivery systems seriously. In place of a putting course on its U.K. site, a \$5-million laboratory suite has just been opened to house an advanced drug delivery unit. The team of 45 scientists, led by Eric Tomlinson, will now swing into action with an annual budget of over £2 million. Interests include particles that would become embedded in tissues—notably the lung—and release drugs there, and the exploitation of natural biological receptor systems to deliver drugs to specific tissues and across barriers such as the gut wall and the blood-brain barrier.

New agreements:

- Eastman Kodak's (Rochester, NY) latest biotech deal is a three-year "preclinical pharmaceutical discovery research agreement" with Panlabs

(Seattle, WA) to screen fermentation broths for biologically active compounds.

- Colgate Palmolive (New York, NY) will pay \$300,000 for an option to distribute a periodontal disease detection kit being developed by Xytronix (San Diego, CA).

- Genzyme Corp. (Boston, MA) and Howmedica (Rutherford, NJ) will jointly develop hyaluronic acid-based products for use in orthopedic surgery.

- Biotech Research Laboratories (Rockville, MD) concluded two three-year contracts with the U.S. Army, valued at a total of \$2.8 million, for the development and evaluation of AIDS vaccines and treatments.

- Hewlett-Packard (Palo Alto, CA) paid an undisclosed amount for Genentech's 20-percent interest in the companies' HP Genenchem joint venture, formed to develop biotech instrumentation.

- California Biotechnology (Mountain View, CA) and the Organon International B.V. subsidiary of Akzo N.V. (Arnhem, The Netherlands) will collaborate in the development of products against Alzheimer's disease and other degenerative conditions of the central and peripheral nervous systems.

- American Cyanamid (Wayne, NJ) has agreed in principle to provide up to \$1.6 million in loans to Cyanotech Corp. (Woodinville, WA) in return for exclusive marketing rights to Cyanotech's eicosapentaenoic acid, which may lower blood cholesterol and prevent heart disease.

Stephen James Prentis, founder of the new Cold Spring Harbor Laboratory journal *Genes & Development*, was killed on February 28 in an automobile accident. Before coming to Cold Spring Harbor last summer, the England-born Prentis worked at Elsevier Publications as managing editor of *Trends in Biochemical Sciences*, *Trends in Biotechnology*, and *Trends in Genetics*. He is also author of the book *Biotechnology: A New Industrial Revolution*.

The editors of *Bio/Technology* mourn the passing of a master of our craft.