

BIOTECHNOLOGY

Susan Hassler (New York)

RESEARCH EDITOR

Harvey Bialy (New York)

ARTICLES EDITOR

John Hodgson (London)

NEWS EDITOR B.J. Spalding (San Francisco)

SENIOR EDITOR Stephen M. Edgington (New York)

PRODUCTION EDITOR Mark Goodstein

EDITORIAL ASSISTANTS Louise Dughan (London) Michael Ginsberg (New York)

CONTRIBUTING EDITORS Joseph Alper (Fort Collins, CO); Bernard Dixon (London); Jeffrey L. Fox (Washington, D.C.); Russ Hoyle (New York); George Kidd (Shorewood, WI); Kevin McGough (Bronxville, NY); Mike Ward (Oxford, U.K.)

ART DIRECTOR

ASST. ART DIRECTOR Edna D. Thomas

Lou Pippo

(New York)

PRESIDENT & PUBLISHER

James Skowrenski

VICE PRESIDENT - SALES

Marion Delaney

ADVERTISING SALES MANAGERS

Sande Graccone (U.S.) Kathryn Wayman (Europe) Marianne S. Ettisch-Mikulka (Classified, U.S.) Julie Skeet (Classified, Europe)

MARKETING DIRECTOR

Barbara Lande

MARKETING **MANAGERS**

Elisabeth Allen (Europe) Edelyn Enerio (US.)

PRODUCTION MANAGER

Estelle B. Selzer **ASST. PRODUCTION** MANAGER

Renée M. Roberts

PUBLISHING DIRECTOR Andy Sutherland

EUROPEAN PUBLISHING MANAGER

John Hodgson

NEW YORK

65 Bleecker St., New York, NY 10012 Tel. 1 (212) 477-9600 Fax: 1 (212) 505-1364 Editorial Fax. (212) 254-9493 MCI ID # 329-8956

LONDON

4 Little Essex St., London WC2R 3LF Tel. (71) 872-0103 Fax: (71) 240-2408

SCIENTIFIC ADVISORY BOARD University of Washington, Seattle

DNAX Research Institute

Scripps Research Institute

Leroy Hood (chair) ken-ichi Arai Roger Beachy Teruhiko Beppu Ronald E. Cape Mary-Dell Chilton Nam-Hai Chua

University of Tokyo Darwin Molecular Corporation Jean-Pierre Changeux Institut Pasteur CIBA-Geigy Rockefeller University Maryland Biotechnology Institute Rita R. Colwell Arnold Demain Massachusetts Institute of Technology Amoco Technology

J. Lawrence Fox David Goeddel Morio Ikehara Ernest Jaworski

Protein Engineering Research Institute Monsanto Company Consultant

Tularık

Kary Mullis Victor Nussenzweig Gregory Petsko George Poste

New York University Medical Center Brandels University SmithKline Beecham

George Rose Carl-Gustaf Rosen Kendall Smith

Washington University Abitec AB New York Hospital/Cornell Medical Center

Yukio Sugino Marc Van Montagu Indra K. Vasil Wataru Yamaya **Douglas Youvan**

Takeda Chemicals University of Ghent University of Florida Seikagaku Kogyo Palo Alto Institute for Molecular Medicine

/FIRST WORD

Are Biotech Companies **Obsolete?**

s one participant at the Bio/Technology/ReCap/UCSF-sponsored conference "Going Direct: Capturing Biomedical Innovation and Bringing it to the Marketplace" held last month in San Francisco remarked, the meeting was a bit of a CEO beauty pageant. As with any pageant, there were some contestants who should have been seen but not heard, but there were also a number of very good acts. Whether you liked, or even agreed with, what they had to say depends upon where you are sitting.

"Going Direct" looked at the kinds of alliances that are being undertaken to move the process of drug discovery and development forward. Among the questions discussed was this eyebrow raiser: Do the big pharmaceutical companies (also called big pharmas) now know enough about biotechnology to go directly to universities for their research and innovation needs, bypassing the biotech intermediaries? Edgar Haber of Harvard School of Public Health and others feel the answer is yes, that biotechs originally had a function to perform, namely to identify and bring forward basic research that had commercially realizable implications, but that the big pharmas are now capable of doing this on their own. Others, like Bill Rutter of Chiron, feel that new technologies and products will continue to demand the creation of new companies-existing organizations can't handle them properly.

Big pharmas are sitting in the catbird seat as far as acquiring basic research and early-stage technologies from cash-hungry universities and biotech companies goes. But they are on the hot seat as far as changes in the industry are concerned. Discovering and making drugs is no longer enough, according to pharmaceutical executives like George Poste of SmithKline Beecham. Big pharmas must move in the direction of becoming full-service, health-care corporations, with the capacity to provide everything from diagnostic screening and genetic counseling, drugs and therapies, to patient surveillance and maintenance. The big pharma buzz words are "disease management" and "control of lives"—the greater the number of lives you control, the greater your distribution system is, and thus the greater your market share. The drugs you make must be big ones-knockoffs won't work in this market.

Research-intensive universities are also in a rosy position. These are not genetically engineered thornless roses, however. Joseph Martin of UCSF, Paul Berg of Stanford, and Harvard's Haber all spoke about the desirable and undesirable aspects of such liaisons. The economic benefits for universities are tremendous. But are graduate students in school to get an education or to provide cheap labor? Should universities be generating knowledge and educated people or revenues and products? There are also formidable questions of academic freedom in the face of trade secrets and patent agreements, as well as of intellectual property rights.

The biotech position is hardly rosy, but there is some good news. For one thing, the pharmaceutical industry is a major, and at the moment avid, consumer of biotech. And although big pharmas may now be able to deal directly with universities, academia may not be able to deal with big pharmas for some of the conflict of interest reasons mentioned earlier—big pharmas may in fact find it easier to deal from one commercial venture to another, thereby letting biotech companies shoulder any conflicts of interest. The only way for big pharmas to realize profits is through innovative products. Outsourcing research to the biotechs continues to be a practical way for these companies to experiment with relatively little risk. The bad news, of course, is that with "consolidation and collapse," as SB's Poste put it, there will be fewer pharmas and thus fewer customers.

There was no talk of biotech-biotech alliances, which is another way for biotech companies to reinvent themselves-to form consortiums either around a set of technologies such as screening, or around a set of disease indications (Genzyme has done this in tissue repair, Baxter in renal transplantation). Why aren't more of these kinds of deals underway? -SUSAN HASSLER