

MEETING REPORT

BLUE-SKY AND BIOTECH 84 U.S.A.

WASHINGTON, D.C.—Online Conferences' traveling biotech gala opened here in September to a packed house of more than a hundred exhibitors and some 800 delegates—up from 650 at Biotech 84 Europe just last spring.

The talk of the town, however, turned out to be the American debut of Wensley Haydon-Baillie and his lavishly promoted Porton International biotechnology conglomerate, which includes LH Fermentation, Speywood Laboratories, and OMEC International. Zsolt Harsanyi is now a director of Porton, while remaining with E.F. Hutton as an advisor. When attendees were not roaming Porton's exhibit-gazebo, conversations were buzzing with rumors about which U.S. firm Porton may have gobbled up most recently.

On the topic of financing biotech operations, Haydon-Baillie pointed to the utility of pension and insurance funds as passive investors. This kind of long-term, non-vested support is particularly suitable for biotech projects, he said.

Steven Burrill, chairman of Arthur Young's high technology group, argued that entitlement—that is, licensing technology or markets that a company itself cannot use or address in the near term—will increase in popularity. For developing companies, he frowned on Small Business Innovation Research grants (too small) and

debt capital (it has to be paid back). He also said that venture capital support is much harder to come by than it was a year ago, public financing leaves a company in a weak position if the stock price drops, and tax-law changes have tarnished the luster of R&D limited partnerships.

The subjects of regulation and biotech linebacker Jeremy Rifkin popped up at many sessions—although a few speakers could not bring themselves to mention him by name. Congressman Albert Gore, Jr. (D-TN) presented his own history of biotech's ongoing fencing match with government regulatory authorities. He concluded that developing more reliable methods of risk assessment for deliberate release of genetically engineered organisms is a high priority. To this end, he proposed expanding the Recombinant DNA Advisory Committee to include individuals trained in ecology and environmental sciences.

The prospect of cramming 10^{15} to 10^{18} electronic gates into a cubic centimeter has made bioelectronics a favorite blue-sky buzzword for biotech pundits. Forrest Carter of the Naval Research Lab, who defined molecular electronics as "the technology of signal control and transport in nanocomposite structures," reported that the state-of-the-art still requires development of 2- and 3-dimensional nanocomposites. While Carter was

enthusiastic about the progress in incorporating highly efficient mechanisms like soliton switching or valving and electron tunneling into molecular chips, he also admitted that each year of research seems to add five years to the target date for production of molecular electronics devices.

Eugene Fox of ARCO Plant Research Institute expounded an idiosyncratic view of the future of agricultural biotechnology. He warned that expectations for major improvements in food crops via gene transfer may well be overblown, since conventional plant breeding has already produced many strains that are near maximal productivity limits. He predicted that the real gains will be made in defining and disseminating disease resistance characteristics.

After Genex's David Jackson cited over a dozen microbes that have promise as the protein factories of the future, Fox reminded him that he had omitted plants from the list. A single genetically engineered plant could produce grams of desirable proteins or chemicals for the price of a little sunshine, he said. In fact, Fox suggested that in the next decade or two we may well see pharmaceutical companies producing interferon in spinach leaves.

Does this mean that Hoffmann-La Roche will soon be buying Agri-genetics?

—Tazewell Wilson
and Arthur Klausner

CHRONICLE

At presstime, University Genetics' president, Alan G. Walton, reported that UGEN will acquire only 55 percent of Trans World Genetics, instead of the 90 percent reported in a news story in this issue. Walton said UGEN has set up a new 100 percent-owned subsidiary, Applied Animal Genetics (Napa, CA), that will do the R&D previously carried out at Trans World. Trans World will become totally sales-oriented, and its new president is Richard Vanderford.

Important product patents in biotech are starting to issue. Heading the list is Stanford University's Cohen-Boyer products patent. Based on a controversial, decade-old application, the patent covers recombinant DNA molecules and their uses in bacteria. In other issuances, Biogen (Geneva) received European Patent Office approval for all forms of recombinant

alpha interferon, and Imreg (New Orleans, LA) was granted U.S. patents for its immunomodulators.

The U.S. Food and Drug Administration will allow Genetic Systems Corp. (Seattle, WA) to market the first monoclonal antibody-based diagnostic test for Legionnaire's disease. The company reports that the test uses a single antibody and identifies all species of Legionnaire's disease-causing bacteria with a sensitivity of 100 percent and a specificity of 98 percent.

Japanese companies continue to link with foreign firms in biotechnology projects. In recent deals, Shionogi reached an agreement with Merck (Rahway, NJ) for joint development of hepatitis B vaccine; Mitsubishi Corp. purchased a stake in Sungene Technologies Corp. (Palo Alto, CA)

and will sell Sungene's seeds in Japan; Sumitomo Chemical has combined with KabiVitrum (Stockholm) to work on growth-accelerating drugs; and Fujisawa Pharmaceutical contracted with Genentech (South San Francisco, CA) to commercialize lymphotoxin.

The enzyme-based drain cleaner manufactured by Genex Corp. is now available to industrial and institutional markets. Called Proto™, the product is specifically designed to dissolve hair, a major drain clog problem.

Authentic human growth hormone has been produced by Bio-Technology General Corp. (New York, NY). It is made via rDNA techniques with subsequent processing using proprietary enzymes to remove an extra methionyl residue on the protein's amino terminus.