

Applied Biochemistry and Biotechnology News

Objective of this Section

In this, the first issue of *Applied Biochemistry and Biotechnology* in its new guise, we inaugurate a section devoted to news. The news covered here regularly will include both fundamental research and developmental activities leading toward commercial applications in the field of biotechnology.

Our intention is to try to summarize the most important events arising between issues and once a year to publish opinions from people whose broad overview of the field of biotechnology will evaluate and put into perspective just what significance reported developments in the past year may have.

We will also from time to time provide a listing of market studies describing the commercial opportunities related to the science of biotechnology, as they become available. The first list is in this issue and represents studies that have become available in the past few years. This list is not meant to be a recommendation of *quality*—only of *availability*.

If any of our readers wish to communicate news they feel is of some importance to other workers in the field, or to express an opinion of general interest, we would appreciate hearing from them.

Lastly, we acknowledge that it would be impossible to cover everything that has happened in the past 2-3 years in this very rapidly developing area of science. Therefore, we admit that we may have been somewhat arbitrary in selecting for this first *News* material that has not been widely publicized in popular news magazines.

News

Nova Industri A/S' pork insulin converted to human insulin is under test at Evidore Hospital near Copenhagen. Clinical studies in the US may begin in 1981.

Stanley N. Cohen and **Herbert W. Boyer** have been granted a broad "process" patent covering many of the fundamental techniques for recombinant DNA technology. The patent has been assigned to Stanford University (US 4, 237, 224).

Cetus Corporation of Berkeley, California has announced plans for a public stock offering in the near future. This follows closely the same financing strategy of *Genentech, Inc.* which sold 1 million of its authorized 7.5 million shares for prices as high as \$89 per share.

The *National Institute of Health* "Guidelines for Research Involving Recombinant DNA Molecules" have been revised again. The major change in the guidelines shifts much of the supervisory responsibility away from NIH to biological safety committees at institutions where research is being conducted. This eliminates the need for scientists to submit plans of their experiments to NIH for evaluation.

In Britain the *Genetic Manipulation Advisory Group (GMAG)* is considering a proposal that it should be abolished. The chief argument presented is that the expertise to perform the "watchdog" role originally assigned to GMAG in 1976 now rests at the locations where the research is being done.

Willi Kullmann of the *Max-Planck-Institute for Biophysical Chemistry* at Göttingen in West Germany has recently used the proteases chymotrypsin and papain, working in reverse, to synthesise the enkephalins. The enkephalins are small neuropeptides believed to function as natural pain killers (*J. Biol. Chem.* 255, 8234).

Dow Chemical has acquired *Richardson-Merrell's* ethical pharmaceutical business in exchange for \$260 million of Dow common stock. The combination of the acquisition with Dow's existing pharmaceutical interests will generate annual sales in excess of \$800 million.

Eli Lilly & Company are planning on producing and selling human insulin in the US and Europe produced by genetic engineering done by *Genentech*. Clinical testing has already started in Britain and plans to spend \$40 million in building plants in the US and Britain have been announced. The US FDA indicated quick approval will be given after *Eli Lilly* submits test data.

Monsanto has invested \$20 million in *Biogen* (a new genetic research company with operations in Geneva). In addition they have increased their own research budget \$45 million primarily in agricultural products, molecular biology and genetic engineering.

The *Office of Technology Assessment (OTA)* in a preliminary report on biotechnology has been generally more pessimistic than the stock market. Some of the key points were:

- Nothing is imminent in the industrial process area.
- For the next 5–10 years most of what will happen will be in health care. First applications will be in diagnostics and then in therapeutic drugs because of the different licensing requirements.
- Next after health care will be specialty chemicals such as amino acids.
- Companies that will benefit in the near term will be those selling supplies to researchers. Some examples are: *Biorad*, *New England Nuclear*, *Bethesda Research Laboratories*, and *New England Biolabs*.

Market Studies

Date	Title	Company	Price
Apr. '79	Genetic Engineering A Technological and Business Opportunity	Predicasts, Inc. Technomic Consultants	\$ 300 On request
NA	Assessment of Genetic Engineering and Related Biotechnology: 1980-1990		
1978	Agricultural R&D for Commercial Application	Frost & Sullivan	\$ 600
1979	Biomass Energy: Business Opportunities	SRI International	\$11,500
1979	Biomass Derived Fuels Here and Now	Gorham International	\$ 5,000
1979	Biomass Fuel and Chemicals	Predicasts	\$ 275
1976	Tissue Culture: Industrial Possibilities	Arnold Services	\$ 650

John Winkler and Rober Leach, *Reporters*