

## Special Issue: Biotechnology

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Biotechnology has been defined as "the application of scientific and engineering principles to the processing of materials by biological agents to provide goods and services." Biotechnology includes traditional fermentation, biocatalysis, and genetic engineering. Gene manipulation has been used to create transgenic oilseed crops with dramatically altered lipid composition. In biocatalysis, we use catalysts, such as whole microbial cells or enzymes, in aqueous or nonaqueous systems, in their free or immobilized form, for the production of useful chemicals. As in chemical processing, the biocatalyst initiates or accelerates a chemical reaction between two or more substrates while the biocatalyst remains unchanged and is recycled. Biocatalytic processes are now used for the preparation of valuable specialty chemicals for pharmaceutical, agricultural, flavor and fragrance, nutritional, and chemical industries. Such processes also are exploited for the preparation of commodity chemical substances on an enormous scale.

On May 8, 1995, at the 86th AOCS Annual Meeting &

Expo in San Antonio, Texas, two symposium sessions on biocatalysis were held with fourteen invited speakers from all over the world. It was very successful, and the discussion continued into the evening. After the meeting, with encouragement from Dr. L.H. Princen, Editor-in-Chief of *JAOCS*, I asked all the speakers to submit manuscripts based on their talks for publication in a "Biotechnology Special Issue" in *JAOCS*. Our efforts materialized. This "Biotechnology Special Issue" consists of those symposia papers, as well as other contributed papers on closely related subjects. Hopefully, this will stimulate further research activities in the biotechnology field.

Finally, I would like to express thanks to my symposia co-chairpersons, Dr. R.N. Patel and Dr. Jei-Fu Shaw, for their assistance, and to The Pharmaceutical Research Institute, Bristol-Myers Squibb Company, for their financial support of these symposia.

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