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Introduction

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The Sixth International Conference on the ''Biotechnology of Microbial Products: Novel Pharmacological and Agrobiological Activities'' was held in San Diego, May 16–19, 1999. The conference was dedicated to Dr. Satoshi Ōmura of the Kitasato Institute for his many contributions and achievements in the field of microbial products. The keynote address was given by Professor Heinz Floss of the University of Washington, on the topic of ''Antibiotic biosynthesis — from natural to unnatural compounds,'' and the banquet address, ''New light on biological control of insects competing for the food we eat: the saga of insecticidal toxins of unusual bacteria living symbiotically with nematodes,'' was given by Professor Jerry Ensign of the University of Wisconsin. These individuals, of course, need no introduction to the readers of *JIM*.

Six sessions of oral presentations, with 29 speakers, covered the critical and timely issues of the field. These included both biological and chemical diversity, regulation of secondary metabolism, and the impact on drug discovery of genomics, bioinformatics and new screening technologies. Additionally, new understandings of microbial biosynthetic pathways, especially aspects of the molecular genetics of diverse pathways, and descriptions of new natural product leads for drug discovery and development were highlighted. An extensive poster session supplemented each of these topical presentations.

Drug discovery and development is becoming more costly every year, with estimates on the order of $500 million to bring a new drug to market. The cost involved for agrichemicals is considerably lower but is still formidable. High throughput screening has inspired pharmaceutical companies to develop large sample collections, but issues of chemical diversity — these collections typically contain many compounds based on relatively few structural themes — and of quality — many of these samples are quite old and were not necessarily preserved in the best ways possible — detract from these libraries. Many of these collections have been supplemented with combinatorial libraries, but the value of combinatorial libraries for drug discovery is still controversial.

Regardless of the current liabilities of screening collections, they provide a potential advantage to companies involved in discovery of new drugs or agrichemicals. Natural products — especially microbial metabolites — have a long history of becoming drugs or providing leads for drugs. While recently many companies have been disinclined to continue with natural products because of perceived time and expense issues compared to synthetic products, natural products still offer the greatest opportunities for accessing structural diversity. One of the keys for success with natural products in today's drug discovery environment will be to make more of them accessible. The topics addressed at BMP '99 impact on this issue from a variety of perspectives. The following papers reflect the BMP '99 presentations, and should be of interest to scientists concerned with the future success of microbial metabolites in the pharmaceutical and agrichemical industries.

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