

CULTURE SERVICES

MYCOSEARCH: STALKING THE WILD FUNGUS

CHAPEL HILL, NC—Is there a business in supplying rare and potentially useful fungi? A start-up company here called Mycosearch thinks so, and it is the only firm in the world to provide such a service.

Barry Katz started Mycosearch in 1979, but the fungus company remained in a vegetative state until recently. He reports that he now has over 15,000 cultures stored in-house, many of which have never been identified or even isolated before. This year Mycosearch received a \$200,000 Small Business Innovation Research (SBIR) grant from the National Science Foundation to screen for fungal strains that degrade PCB, DDT, and cellulose. Other strains could produce commercially useful drugs, pesticides, and enzymes.

Katz has scoured the globe for forest litter from which to culture fungi. His collection includes isolates from Brazil, Costa Rica, Thailand, and India, as well as the U.S. Usually, Katz says, sporulating fungi like *Penicillium* and *Trichoderma*, which compete very well on agar, overwhelm non-sporulating or rarely sporulating classes, such as the Ascomycetes and Basidiomycetes. "There are no published methods on how to remove or reduce the recovery of sporulating fungi without destroying the vegetative organisms in the process," he says.

Katz's business centers around his proprietary ability to isolate vegetative fungi, so he is reluctant to talk about techniques. The general method involves washing the samples several times, growing cultures on various restrictive media, plating them out, and undertaking painstaking mi-

croscopic analysis. Experts disagree on whether other researchers could master this technique, but Katz's 15 years of experience in studying these fungi is invaluable. According to Katz, the composition of the media, physical manipulation of the cultures, and appropriate incubation are all crucial. "The key to recovering poorly sporulating microorganisms involves solving more than one variable simultaneously," he says.

Mycosearch has been selling unscreened cultures for about \$100. Previously, Katz supplied strains to the Parke Davis subsidiary of Warner-Lambert (Detroit, MI), which was looking for anti-tumor compounds. He also sold cultures to Miles Laboratories (Elkhart, IN), which screened them for various drug-related activities. "In general, I'm very pleased with the strains we've gotten from Mycosearch," says Graham Byng, a senior research scientist at Miles. He adds that after receiving some 700 cultures, Miles decided not

to order any more because the company had found so many interesting things to work on.

Currently, Mycosearch is selling cultures to Merck & Co. (Rahway, NJ) under a five-year contract. "We're very satisfied with our relationship with him," is the only comment that Merck's Edward Stapley will make.

Selling unscreened cultures does not leave much room for company growth. Consequently, Katz is trying to get into the business of screening strains for activity *before* selling them to interested parties. He believes that in the area of PCB-degrading fungi, for example, cultures with demonstrated activity might sell for about \$2,000 each. He has worked with The New Directions Group (Norwalk, CT) to refine his business objectives, and is now involved in raising \$500,000 through a private placement.

Katz hopes that Mycosearch's staff of three will increase to eight people by the end of 1986, and then bloom to 25 in 1987. —Arthur Klausner

IMAGE
UNAVAILABLE FOR
COPYRIGHT
REASONS

MEETING REPORT

FIGHTING THE SCOURGE OF 'EUROSCLEROSIS'

BRUSSELS—Europeans have started to fight Euro sclerosis. Sleeves up, keep the Americans and Japanese from running away with the latest technologies—that is the message you can hear from all sides," said Ernst von Weizsacker, director of the Institute for European Environmental Policy in Bonn, F.R.G., at a conference here organized by the Centre for European Policy Studies and the Commission of the European Communities. "The problem appears to be that we have more disputes about the direction of our own running, and that environmentalists and other citizens express a lot of hesitation with regard to new technologies."

Acknowledging the immense potential benefits of biotechnology in agriculture, medicine, and effluent treatment, von Weizsacker warned that vigorous action to protect the environment is not in any way contrary to vigorous exploitation of novel technology. "People in Europe tend to be surprised to learn that the Japanese, for example, have not only made astonishing progress in key areas of research and development, but have at the same time pioneered stringent environmental protection policies, and even taken the lead in clean technologies and pollution control." Yet the last 15 years of environmental action have also seen the

emergence of a new generation of technologies—to decentralize production, replace energy and materials with information, and substitute sophisticated biological processes for crude chemical ones.

"As everyone knows," von Weizsacker concluded, "information and sophistication do not by themselves pollute the biosphere. Indeed, strong environmental action in Japan was found to be a powerful whip for accelerating technological progress. I am tempted to suggest that Europe will also need a more determined environmental policy if we are to free ourselves from our lamented Euro sclerosis." —Bernard Dixon