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Dr. Joseph Cooney to Work on Microorganism Project

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DAYTON, Ohio, June 16, 1969 --- Dr. Joseph Cooney, Associate Professor of Biology at the University of Dayton, would take "the bug from your gas tank and place it on your table." Sound far fetched, or confusing?

Not really!

Dr. Cooney hopes he can turn microorganisms, formed in fuels, into high quality protein and will begin work on the project this summer. He is aided by a research grant from the Firestone Coated Fabrics Company, a division of the Firestone Tire and Rubber Company.

"We are studying the growth of bacteria and fungi in hydrocarbon systems," he says. "Many kinds of microorganisms can grow at the expense of hydrocarbons (oils, kerosene, cooking gas, etc.). The growth of such organisms is important since this growth may have deleterious effects in such places as jet airplane fuel systems. For this reason, one aspect of our work involves evaluating antimicrobial chemicals as a means of controlling growth in fuels.

"Another reason for studying these microorganisms," continues Dr. Cooney, "is that they are a potential means of treating petroleum wastes which can pollute natural bodies of water.

"This study of growth is important, too, because the organisms could be the source of high quality protein to supplement the diets of people in emerging nations. Such dietary supplements are called single cell protein, or SCP. Many of them provide better quality protein than wheat, corn or rice.

"The thought of eating bacteria or fungi," he concludes, "may seem repulsive to some, but when we take yeast tablets, use yeast cakes, or eat mushrooms we are eating fungi. And, too, antibiotics are really the waste products of microorganisms."

In conducting this research Dr. Cooney is asking some very basic questions:

How do antimicrobial chemicals act?

How do the bacteria and fungi use hydrocarbons?

What kinds of organisms will survive in hydrocarbon systems?

How does the growth of one organism effect the growth of others in the same environment?

Dr. Cooney has received other grants in this area of research through the University of Dayton Research Council, Monsanto Research Corporation and a previous contract from the Firestone Company. He has done work for the United States Air force in this area.

His research has led to five papers in scientific journals, three presented at national scientific meetings and three in preparation.

Dr. Cooney is being assisted in this work by Mr. James A. Felix, assistant research bacteriologist, and two graduate students, Charles M. Proby and John D. Walker.