

CONVERSATIONS UNLIMITED - Monday, July 28, 1986

INTRO UP AND UNDER

Hi, everybody. We'll be talking with two scientists today. One has just gone through the amazing experience of being informed that he is being given \$200,000 with no strings attached in order to help carry on his research at the State University of New York at Stony Brook. The second has been in Washington recently testifying before members of Congress about the dangers -- and safety -- of genetic engineering. We'll talk with Dr. Monica Riley about one of the more important public policy aspects of modern biotechnology -- that is, how to manage safely the release into the open environment of genetically engineered micro-organisms. Dr. Riley is here in the studio with me and we'll talk with her in a few minutes.

But first, let me introduce Dr. Paul R. Adams, a neurobiologist on the faculty at Stony Brook. He is one of 25 people chosen nationwide in mid-July for the prestigious MacArthur Fellowships. For him, the selection means a grant of \$200,000 over five years to use in any way he chooses. Dr. Adams is in Woods Hole, Massachusetts, during July, lecturing in a course on neurobiology at the Marine Biological Laboratory. He received there the telephone call that informed him of his being chosen. Now I should note that one cannot apply for the MacArthur Foundation awards, nor can one be nominated by friends and colleagues. The awards have been likened to the old television series called "The Millionaires," in which a wealthy man each week gave a million dollars to a worthy person he had picked secretly.

I interviewed Paul Adams by telephone and we'll hear some of that conversation now. He was, of course, in good spirits and filled with humor. I began by asking him his reaction when first informed of his good fortune."

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2:00

TAPE: "Well, when the man told me..."

AFO LIVE: The MacArthur Foundation, in honoring Paul Adams, cited his significant contributions to understanding the central nervous system by combining the resources of neuropharmacology, neurophysiology and biophysics. Dr. David Cohen, who chairs the Department of Neurobiology and Behavior at Stony Brook, called the choice "absolutely spectacular." Dr. Adams, he said, is "one of the brightest, most imaginative people in his field."

And now we'll turn to another field, that of genetic engineering technology. A major fear is that researchers, trying to improve plant and human life, will release micro-organisms that will make life unable to ward off certain diseases; or, worse, may even create new diseases. Throughout the world, scientists, politicians and others are debating the role of government and regulations. On one extreme end are those who see little if any danger from many genetic experiments releasing micro-organisms into the environment. On the other extreme end are the alarmists who liken some genetic research to releasing nuclear radiation into the open environment.

With me now is Dr. Monica Riley, professor of biochemistry at the State University of New York at Stony Brook. Dr. Riley is active in the American Society for Microbiology, serves on the society's Public and Scientific Affairs Board and chairs the Genetic and Molecular Microbiology Committee.

You testified in Washington recently, Dr. Riley, on a bill introduced by Representative Don Fuqua. His bill, basically, would try to bring safety controls to a potentially dangerous field. Is there cause for fear?

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INTERVIEW DR. RILEY:

- Discuss briefly some potential dangers
 - * Gaps in science (no science of predictive ecology;
e.g., imported gypsy moth and escargots)
 - * Military "defense" (germ warfare)
 - * Industrial competition (haste to be first:
ice-minus in California strawberry field)
- In centralization of control needed (federal laws
supersede state laws which supersede county)
- Outline provisions of Fuqua bill
- How will this bill make out?

13:15

We'll take a short break now. When we return, I'll be talking with Monica Riley about some of progress already made in genetic engineering. Please stay tuned.

BRIDGE MUSIC UP AND UNDER

Hi. I'm Al Oickle, and I'm at the State University of New York at Stony Brook with Monica Riley, professor of biochemistry at Stony Brook. We're talking about genetic engineering, and so far we've outlined some potential dangers and the efforts of government to control research. But progress is being made to help improve the conditions of life on earth. I've read that nearly 6,000 patent applications for biological processes and products were awaiting federal action earlier this year. That's more than a strong hint that researchers are up to something good, isn't it?

- Outline some good:
 - * Human disease
 - * Plant life
- Discuss individual and partnership roles of:
 - * Universities
 - * Industry
 - * Cite Stony Brook's incubator

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- Role of public scrutiny (note Mendelsohn's quote re lay understanding - Page 63 Discover)
- Jerry Rifkin: goal to raise fundamental questions about ... consequences of genetic engineering before the technology becomes entrenched."
- Discuss what lies ahead:
 - * in laboratory
 - * in government
 - * international role
- What can average citizen do?

~~87:30~~

OUTRO

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