Mitsuru J. Nakamura releases new knowledge on the causes of dysentery, hepatitis, and other ulcerations

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New knowledge about the "bug" that causes dysentery, hepatitis, and other ulcerations that affect large numbers of people in the United States has come out of the laboratory of Dr. Mitsuru J. Nakamura, associate professor of bacteriology at Montana State University, Missoula.

The incidence of disease caused by the one-cell parasite known to bacteriologists as Entamoeba histolytica is estimated to be as high as 10 per cent in the United States, Dr. Nakamura said. The infection is transmitted primarily by unsanitary conditions and poor personal hygiene practice, he added.

Dr. Nakamura has been studying the biochemical and physiological aspects of the organism with hopes of establishing a metabolic map so that more information may be obtained on how the parasite operates to cause disease. He is also trying to find a more rational approach to treating the disease with chemicals that will have a toxic effect on the organism without harming the patient.

The research is supported by a grant from the Office of the Surgeon General, Dept. of the Army. MSU students serving as research assistants on the project are Philip R. Edwards, Jr., Missoula; Maung Maung, Washington, D. C.; Bonnie Pitsch, Garryowen; Thelma Hood, Thermopolis, Wyo., and Kathleen Harris, Livingston.

"The research has established that the organism possesses certain enzymes which may in some way be responsible for the lysis, or cell destruction, of tissue in the intestine," Dr. Nakamura stated.

"Another aspect of the project consists of studying chemical agents which might destroy the cysts of the organisms," he continued. "The reason for this is that the cysts are responsible for infection and they are usually destroyed only by heat; as a matter of fact, domestic sewerage passing through a sewage treatment plant is not freed of the cyst. Even excessive chlorination of drinking water does not destroy the cysts."

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