

# Golden test

## WSU technique can spot viral infections

A Wayne State University biologist has developed a new method of testing for viral infections. He said it eliminates the false-positive and false-negative results that plague currently used tests.

"This technique can detect extremely low levels of antibodies in human serum," said Dr. V. Hari, professor of biological sciences at Wayne State.

Hari, of Bloomfield Hills, and graduate students David Baunoch and Pritham Das developed the viral testing method and have filed for a patent.

THE TECHNIQUE involves plac-

ing gold molecules on antibodies to detect the virus.

Antibodies are produced by the body to attack foreign substances. If the gold-tipped antibodies attach to a cell, the cell vividly shines when viewed through an electron microscope.

Current virus-detecting tests use color-development reagents which react with viral antibodies as indicators of a virus' presence. But color is subjective, Hari said, so the test results can be incorrect.

In Hari's testing technique, the results are definitive — either the virus is present or it is not.

"Especially with the HIV (AIDS) virus, it's important that you're ac-

curate. With HIV, even a 1 percent error is a significant error, because you're basically condemning a human being."

HARI AND HIS students have tested the technique on two plant viruses, the human herpes virus and one produced in human food poisoning.

In all cases, the technique worked beautifully. Through the electron microscope, the gold-tipped antibodies detected the presence of the virus. "They just lit up," Hari said.

"It looks like a very promising system. There's no reason it shouldn't work with a virus, including the AIDS virus," he said.

Gold-attached antibodies are nothing new. They have been used in virus location, Hari said, but not in viral infection diagnosis.

HARI SAID he would like to make the technique more accessible to the medical profession. Although major hospitals have electron microscopes, "We want to carry this from the electron microscope to the light microscope."

"What we need is money from private or public sources to fund the development of this technique," Hari said. "We would also like to investigate the possibility of transferring this technology to private industry."

# New device tracks industrial polluters

Two Wayne State University educators have developed a computer program to help track industrial pollution violators in the metropolitan Detroit water and sewer system.

The system is "far more comprehensive" than those being used in

other municipalities, according to a press release from the university.

Steve Salley, an associate professor of chemical engineering, developed the program. He had assistance from Ralph Kummer, of Birmingham, chairman of the chemical and

metallurgical engineering department.

EMPLOYEES at the Detroit Water and Sewerage Department are being trained to operate the computer program.

The system will cover 700 industries that send waste into the city's treatment plant. It will keep track of each company's volume and alert operators to ordinance infractions.

In addition to enforcement of ordinances and tracing violators, Kummer said the system also would assure the customers that they are

paying their fair share for water treatment.

Salley, a Detroit resident, said that the staff training will be completed by the end of December and the program fully operational "in the next couple of months."

THE PROJECT was initiated with seed money from WSU's Institute of Chemical Toxicology.

The cost was underwritten by the U.S. Environmental Protection Agency, the Detroit Water and Sewerage Department and the Michigan Department of Natural Resources.

# Diabetes, baby classes next month

Classes for expectant parents and diabetics will be offered free next month by the Oakland County health division's south office at 27725 Greenfield Road, Southfield.

Expectant parent classes run 7-9 p.m. on six Tuesdays beginning Jan. 10. Public health nurses teach nutrition, growth of the fetus, labor, delivery and infant care.

Diabetes classes also run 7-9 p.m. six Thursdays beginning Jan. 19. A public health nurse and a dietitian develop the program. He had assistance from Ralph Kummer, of Birmingham, chairman of the chemical and

No fees are charged, but you should preregister by calling the health division at 424-7042.

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