

# Intercom

## Duke University Medical Center

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DURHAM, NORTH CAROLINA

### Scientist Studies Pesticides, Nerve Damage

By David Williamson

A pharmacologist here has received a \$106,000 contract from the Environmental Protection Agency to continue his studies of a group of organophosphate pesticides.

One of the compounds he is studying, leptophos, has recently been implicated in an outbreak of nerve disorders among workers at a Texas chemical factory.

Dr. Mohamed B. Abou-Donia, assistant professor in the Department of Physiology and Pharmacology, said he is trying to determine which and to what extent organophosphates now on the market are health hazards.

#### Delayed Neurotoxic Syndrome

He said he is also trying to establish standardized experimental procedures for the study of delayed neurotoxic syndrome, a condition brought about by certain organophosphates and often misdiagnosed by physicians as multiple sclerosis or encephalitis.

Investigators for the National Institute for Occupational Safety and Health (NIOSH) are investigating the possibility that leptophos is responsible for partial paralysis, muscular coordination problems, blurred vision, choking sensations and dizziness among some employees at the Velsicol Chemical Corp.'s Bayport, Tex., plant.

"The problem with leptophos and at least one other organophosphate still being sold is that they can produce this delayed neurotoxicity in man and certain animals," Abou-Donia said. Symptoms usually develop seven to 14 days after heavy

exposure to the compounds, but they may not show up for months after contact, he added.

#### Most Dangerous Effect

"The most dangerous and irreversible effect of the chemicals is that they degenerate the protective myelin sheath surrounding nerves and attack the axon which carries impulses away from the nerve cell body," he said.

The other insecticides Abou-Donia is testing are EPN, DEF and merphos. EPN, he said, is almost twice as damaging to nerves as leptophos, according to recent experiments. It is currently licensed for use on food crops in the United States.

The University of California Ph.D. said he was among a team of investigators who concluded in 1971 that leptophos was probably responsible for the paralysis and deaths of more than 1,200 water buffaloes in an area sprayed with the insecticide in Egypt's Nile delta.

#### Personal Warning

He said he published a report of his later experiments on the delayed neurotoxicity of the organophosphate in January of 1974 and personally warned its manufacturers of dangers to workers three months later in Chicago.

Velsicol has announced it discontinued producing the insecticide early this year.

"I'm concerned that the United States government will not allow chemical companies to sell their insecticides within this country until they have been proven safe, but

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IN THE LABORATORY—Dr. Mohamed B. Abou-Donia, assistant professor of pharmacology, is studying a group of organophosphate pesticides to determine if chemicals now on the market damage nerves. Included among the pesticides is leptophos, currently suspected of causing paralysis among some employees at a Texas chemical factory and farm workers in Egypt. (Photo by David Williamson)

### Dr. F. Bayard Carter Dies; Founded Dept. of Ob-Gyn

Dr. F. Bayard Carter, who founded the medical center's Department of Obstetrics and Gynecology in 1931 and helped to make childbirth a safer undertaking for millions of women, died here on Wednesday, Dec. 22.

He was 77.

Dr. Carter stepped down as chairman of Ob-Gyn in 1964 and retired as professor in 1969. Since that time, he had maintained a private practice in Durham.

He was admitted to the hospital on Wednesday, Dec. 15, after suffering a heart attack while driving home from work.

Surviving are his daughter, Mrs. Ann Hamilton Wears of Boston, Mass.; his grandson, Peter Bayard Wears of Durham; his granddaughter, Miss Jeanette Hamilton Wears, also of Durham; and a sister-in-law, Mrs. J. Phillip Lane of Boston.

A memorial service for the surgeon was held on Monday, Dec. 27, in the Duke Chapel. In lieu of flowers, his family asked that contributions be made to the F. Bayard Carter Endowed Professorship Fund, Duke University.

#### Educational Background

Born on Jan. 20, 1899, in Wilmington, Del., Dr. Carter attended public schools and earned a Bachelor of Arts degree from the University of Delaware in 1920. After winning a Rhodes scholarship, he attended the Honour School of



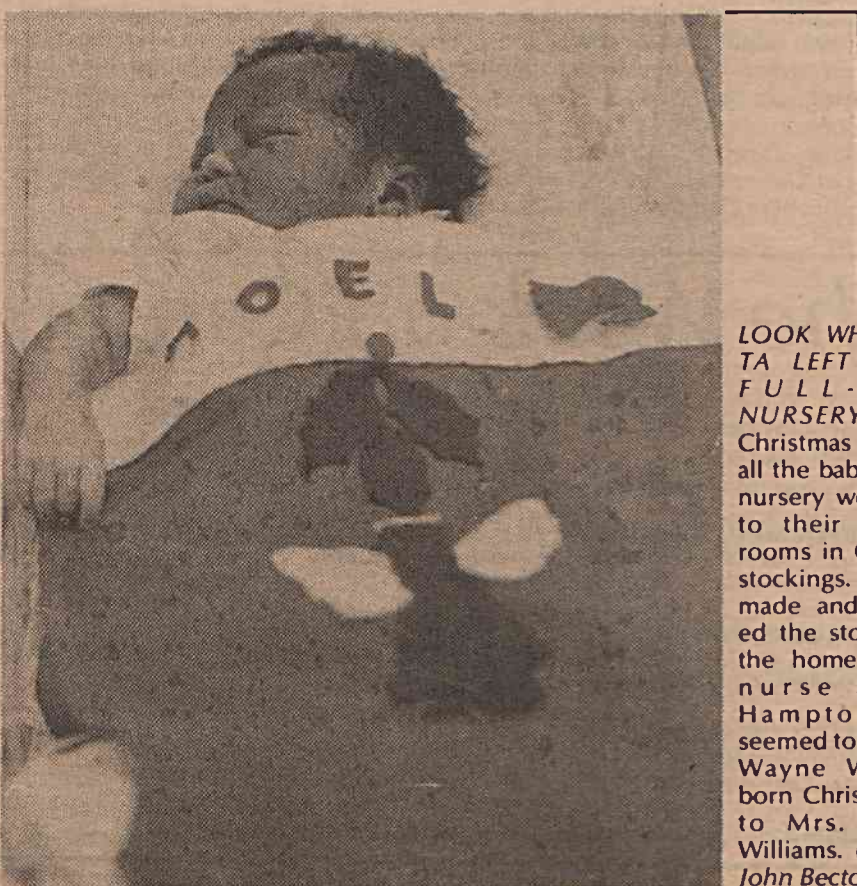
DR. F. BAYARD CARTER

Physiology at Oxford University's Balliol College, receiving both B.A. and M.A. degrees.

He completed his M.D. at Johns Hopkins University Medical School in 1925 and served residencies in internal medicine and obstetrics-gynecology at Yale University.

After two years as professor and acting chairman of Ob-Gyn at the

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LOOK WHAT SANTA LEFT IN THE FULL-TERM NURSERY — On Christmas morning all the babies in the nursery were taken to their mothers' rooms in Christmas stockings. The staff made and decorated the stockings at the home of head nurse Mayme Hampton. That seemed to suit Brian Wayne Williams, born Christmas Day to Mrs. Cynthia Williams. (Photo by John Becton)