

RESEARCH

LSD fed to pregnant rats has caused biochemical defects in their offspring, according to Dr. Velayudhan Nair, director of therapeutic research at Michael Reese Hospital and Psychiatric Institute, Chicago Medical School, Chicago, Ill. Unlike some other investigators, Dr. Nair observed no gross malformations or chromosomal damage in the offspring of rats given oral doses of LSD during pregnancy. The most significant effect, he says, appears to be suppression of the essential brain chemical serotonin. LSD also apparently inhibits the development of liver enzymes hexobarbital oxidase and *o*-demethylase. LSD's effect on serotonin appears to be a significant finding, Dr. Nair says, because of the chemical's association with behavior disorders such as sleep abnormalities and hypersexuality.

Widespread use of phenoxy herbicides has produced no demonstrable harm to man, according to Dow vice president and research director Julius E. Johnson. Dr. Johnson, speaking to members of the American Institute of Biological Sciences at their Bloomington, Ind., meeting, said that Dow's tests confirm the high toxicity of a dioxin contaminant of 2,4,5-T (C&EN, Feb. 16, page 11), but the tests do not support findings of teratogenicity of 2,4,5-T itself. Careful quality control in the manufacture of 2,4,5-T keeps the contaminant dioxin from becoming a "meaningful environmental contaminant," he added. Studies of three other herbicides—silvex, 2,4-D, and picloram—also showed no teratological effects in embryos of rats and rabbits, he said.

There are no signs yet of pathological effects of low-power microwaves on monkeys in studies under way for several months at Southwest Research Institute. The studies involve blood chemistry, hematology, histopathology, and physiological parameters such as body temperature and electrocardiograph measurements, says Dr. James N. Bollinger of SWRI's department of physical and biological sciences.

Temperatures near absolute zero may be measured more accurately with a new scale based on susceptibility measurements of two paramagnetic salts, chromic methylammonium alum and manganous ammonium sulfate. The scale for use in the region from 1° to 20° K. has been developed by Dr. T. C. Cetas and Dr. C. A. Swenson at the Ames Laboratory of the Atomic Energy Commission and the physics department of Iowa State University. The procedure is independent of systematic errors that enter into gas thermometer or acoustic measurements and is accurate to $\pm 0.001^\circ$ K.

Absorbed dose distributions of single pulses of electron radiation can be measured with a holographic interferometer developed by Dr. Eckart K. Hussmann at National Bureau of Standards. The technique measures changes in the refractive index of a transparent absorbing liquid—such as distilled water—that are due to the temperature rise produced by the absorption of electrons.

Private industry's interest in controlled hydrogen fusion research comes alive in a \$50,000 grant by Public Service Electric & Gas Co., Newark, N.J., to support fusion research at Princeton University. Princeton's fusion program director Melvin B. Gottlieb thinks that because of today's environmental and financial problems, the time is right. "We need industry's support and we need its advice on various aspects of power production—and industry needs the reactor we are trying to build."