

# life sciences notes

## DRUG REGULATION

### Tranquilizer Placed Under FDA Control

The Food and Drug Administration has added meprobamate to its list of drugs with a "potential for abuse" that are subject to the restrictions of the Drug Abuse Control Amendments of 1965. Under the amendments, manufacturers and druggists are required to keep careful records of the production and sale of listed drugs and physicians' prescriptions for these products are valid for only six months.

Meprobamate, a commonly prescribed tranquilizer for relief of mild anxiety and tension, is sold under the brand names Miltown and Equanil. FDA's listing of these drugs under the Amendments follows a four-month series of public hearings last winter (SN: 2/25) during which evidence indicated that sustained high doses may induce stupor, depression, apathy and personality changes and that meprobamates are sold widely on the black market. When the FDA decision to include meprobamate on the control list takes effect at the end of February, officials of Carter-Wallace Inc., which holds exclusive rights to market the drug in the U.S., are expected to challenge FDA in court on grounds that meprobamate does not, as claimed, have a potential for abuse.

## CANCER

### Disappearing Virus Found Among Genes

The case of at least one disappearing cancer virus has been solved by Texas researchers. They find that when Simian Virus-40 infects a mouse kidney cell, it sheds its protein coat and releases its genetic material (DNA) into the host cell's genes—also composed of DNA. In effect, the viral DNA becomes part of the cell's supply of genes.

One major challenge facing researchers has been to unravel the mystery of cancer-causing viruses that seem to disappear from or inside a normal cell after infecting it. Although recent experiments, completed by Dr. Saul Kit and co-workers at Baylor University College of Medicine, Houston, prove only what happens to SV-40, further studies may show that other disappearing cancer-causing viruses behave similarly.

SV-40 is known to induce cancer in monkeys, hamsters, mice and cultured human embryonic cells, but is not known to cause cancer in human beings. Nevertheless, scientists at the American Cancer Society are studying persons who were exposed before spring 1961 to SV-40 when they received contaminated polio vaccines grown in monkeys which are naturally infected by the SV-40 virus. Subsequent batches of vaccine have been free of the contaminating SV-40 virus.

## ENDOCRINOLOGY

### Exercise Controls Thyroid's Iodine

Exercise regulates the total amount of iodine in the thyroid gland. Experiments with rats show that active animals store only half as much dietary iodine as their sedentary counterparts, Dr. Buck A. Rhodes of Johns Hopkins University reports in the Dec. 2 issue of NATURE.

The body uses iodine to make thyroid hormone which it uses in turn to regulate the metabolic activity of cells.

"Previous studies have not led to a general concept of the role of the thyroid gland in exercise," Dr. Rhodes says. He suggests that during exercise, utilization of thyroid hormone increases so that more dietary iodine is converted to circulating hormonal iodine and less is simply stored in the gland. Increased utilization may occur because the body's demand for thyroid hormone goes up in association with increased expenditure of energy and the ensuing increase in respiratory activity, which can affect the rate of cell metabolism.

## SINGLE CELL PROTEIN

### Red Tide Used In Animal Feed

Red tide, a single celled plant pest that grows in the ocean off California and Florida, is a safe food for laboratory animals. Rats thrived as well on red tide as on a diet rich in casein, a high quality milk protein, according to a team of California and Pennsylvania researchers led by Dr. Stuart Patton of Penn State.

Experiments showed that powdered red tide has up to 26 percent protein, including all the amino acids necessary for nutrition. It could be used as a protein feed for cows, the scientists suggest. Humans cannot digest it.

Red tide, a type of phytoplankton at the beginning of the aquatic food chain, grows abundantly, though scientists don't know why. Some suggest that temperature and the oxygen content of ocean water control the rate of its growth. So far, scientists have been able to harvest only small quantities of the abundant tide, using fine nets or seines to collect it.

Although the type of red tide studied, *Gonyaulax polyedra*, reportedly kills shell fish, it showed no toxicity in the rat experiments.

## ANTIBIOTICS

### Company Recalls Five Million Capsules

McKesson & Robbins Company recently recalled its entire supply of a potent antibiotic because of possible delayed effectiveness. The drug, known generically as chloramphenicol, is sold by McKesson under the brand name Amphicol. It is used only for serious infections including typhoid fever and meningitis.

The Food and Drug Administration, which is currently investigating the clinical effectiveness of several brands of chloramphenicol (SN: 12/9), said the company voluntarily recalled five million capsules from 55,000 drug stores and 10,000 hospitals. A spokesman for McKesson said the company's laboratory tests showed the drug was not being absorbed into the bloodstream "as rapidly as we would like."

In recent testimony before the Monopoly Subcommittee of the Senate Small Business Committee, a Parke, Davis & Co. scientist charged that competing brands of this antibiotic—originally developed at Parke, Davis—were less effective than the company's version. The FDA indicated that Parke, Davis equivalency studies figured in the recall.

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