

MEDICINE

Substitute for Morphine Found After Long Search

New Substance Can Now be Made Under Government License for Further Trials on Patients

AFTER years of painstaking research, scientists have produced a new derivative of morphine in the course of experiments directed toward the discovery of a non-addicting form of morphine.

Dihydrodesoxymorphine-D is the name of the new drug. It was made by Dr. Lyndon F. Small, University of Virginia research chemist. It is ten times as effective as morphine in relieving pain.

Given as a substitute for morphine to persons addicted to the latter drug, the new product satisfied the cravings of the addicts and relieved the painful abstinence symptoms that follow withdrawal of morphine. This indicated that it also might be habit-forming.

Tests with monkeys and other animals indicate that these animals develop tolerance to the new drug as they do to morphine. It is not certain, however, that experiments on monkeys are a correct index of the new drug's addiction or habit-forming property for man.

Final Test

The final test of this point is now about to be made. Patients suffering from severe cancer and advanced tuberculosis are sure to become addicted to morphine, because that is the only drug which will control their pain and cough. A group of such patients will soon be given the new drug instead of morphine to relieve their suffering. If they fail to develop addiction to the new drug, dihydrodesoxymorphine-D will be hailed as the long-sought, safe substitute for morphine, and possibly as an aid in the prevention of narcotic drug addiction. If it can be used in the case of persons already addicted to narcotic drugs, it might aid in their "cure."

Since Dr. Small can produce only a limited amount of the new morphine in his laboratory, he has patented his discovery and given the patent rights to the Secretary of the Treasury. The

Commissioner of Narcotics is now able to license manufacturing firms to produce enough of the new drug to complete the clinical trials.

The discovery of dihydrodesoxymorphine-D was the result of a concerted attack on narcotic drug addiction by several groups of scientists working under the guidance of the National Research Council. Cooperating with the National Research Council's committee have been the U. S. Public Health Service, the Narcotic Bureau of the U. S. Treasury, the University of Michigan and the University of Virginia. Members of the National Research Council drug addiction committee are:

The Committee

Dr. William Charles White, National Institute of Health, U. S. Public Health Service, chairman; H. J. Anslinger, U. S. Commissioner of Narcotics; Prof. Charles W. Edmunds, University of Michigan; Dr. Ludvig Hektoen, Director, McCormick Institute for Infectious Diseases; Prof. C. S. Hudson, U. S. Public Health Service; Prof. Reid Hunt, Harvard University; Dr. Frederick B. LaForge, Bureau of Chemistry and Soils, U. S. Department of Agriculture; Prof. Torald Sollmann, Western Reserve University; Dr. Walter L. Treadway, U. S. Public Health Service; Prof. Carl Voegtlin, National Institute of Health, U. S. Public Health Service; and Prof. Francis G. Blake, Yale University, chairman of division of medical sciences, National Research Council.

At the University of Virginia a research laboratory was established under Dr. Small's direction for chemical analysis and synthesis of alkaloid substances related to or similar to morphine. Because few American chemists had worked on alkaloid chemistry in the past 25 years, it was necessary at the start of the work to import chemists from Europe for Dr. Small's laboratory. Dr. Small himself spent two years in narcotic research in Europe. The "imported" chemists who have



EARTH'S OLDEST EGG

The proudest product of the Chinese delicatessen industry would rate as extra strictly fresh alongside the 225,000,000-year-old fossil under the microscope of Dr. Llewellyn Price, Harvard Museum paleontologist who discovered it in the Permian Red Beds of Texas.

worked with him are Dr. Erich Mosetting and Dr. Alfred Burger.

At the University of Michigan another research laboratory was established under the direction of Prof. C. W. Edmunds and Dr. Nathan B. Eddy, for biological testing of the narcotics and their substitutes.

All clinical work is being done under the direction of Dr. Walter Treadway, chief of the division of mental hygiene, U. S. Public Health Service.

Funds for the work are being provided by the Rockefeller Foundation.

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PALEONTOLOGY

World's Most Ancient Egg Discovered in Texas

THE world's oldest fossil egg, approximately 225,000,000 years old, has been found in the Permian Red Beds, an exceedingly ancient geological formation of north central Texas, by the recently returned expedition from the Harvard University Museum of Comparative Zoology.

The egg, three inches long and rusty