

MEDICINE

Synthetic Pain-Killer

Dromoran is only three steps, chemically, from being long-sought synthetic morphine. No one wants to complete synthesis because new drug is so much better than morphine.

➤ A BRAND-NEW pain-killing drug, more powerful and longer acting than morphine, has joined the group of synthetic drugs which now make the United States independent of foreign sources of opium and its derivatives, morphine and codeine.

The new drug is almost a synthetic morphine. It has the trade name of Dromoran. It is not yet on the market, although a new-drug application has been filed with the U. S. Food and Drug Administration. This means it could be marketed whenever its manufacturer, Hoffmann-La Roche, wants to do so.

Dromoran is just three steps, chemically, from being synthetic morphine. Two of the three steps could easily be taken by many chemists, but the last one may stop them from reaching the long-sought goal of synthetic morphine itself. For practical purposes, no one now cares about completing the synthesis because Dromoran is so much better than morphine. It can even serve as a source of synthetic codeine.

The synthesis of Dromoran was started by a German chemist, Dr. Rudolf Grewe, at Gottingen during World War II. Dr. Grewe then went to Basel, Switzerland, where he worked with chemists at Hoffmann-La Roche's laboratories to complete the synthesis of Dromoran. When first re-

ported in scientific journals, it was given either its code name, Nu 2206, or its chemical name, 3-hydroxy-N-methyl-morphinan.

Closely related to morphine, Dromoran is even more closely related to desomorphine, a synthetic pain-killer developed by Dr. Lyndon F. Small of the U. S. National Institutes of Health. Desomorphine is the most powerful pain-killer known, but is very short-acting. Because its effects wear off so quickly, it has not been marketed in this country, though it is made in Basel and used a lot in Switzerland and some other European countries.

Dromoran unfortunately can cause drug addiction, like morphine. If marketed here it would have to be under control of the Federal narcotics law, as morphine is. This is also true of three other new, synthetic pain-killers: Demerol, methadone and levo-isomethadone.

Methadone and levo-isomethadone have proved their worth not only in civilian hospitals in this country but in Army hospitals in Korea and Japan. Wounded soldiers given these drugs reported they made the pain "float away."

The fact that these four drugs make us independent of foreign sources of opium was stressed in a report from the National Research Council.

Science News Letter, February 10, 1951



REVOLUTIONARY — Dr. William F. Durand of Stanford University here displays the model of the first variable pitch propeller which he invented 33 years ago, thus revolutionizing propeller design. He is now sending the model to the Smithsonian Institution.

PSYCHIATRY

Shut-in Personality Provides Good Defense

➤ THE MENTALLY disturbed person who withdraws within himself and seals himself off from other persons has built a defense with high protective value for his personality.

So report Drs. Seymour Fisher and Rhoda Fisher of Elgin State Hospital, Elgin, Ill.

Their conclusion was based on a study of the histories of 66 patients suffering from paranoid schizophrenia. Paranoid schizophrenics were selected for the investigation because they are the most easily identified under the current diagnostic scheme. All available material was gathered to show the degree of outgoingness and sociability during childhood and adult life for each individual.

Of those who had been outgoing and sociable in childhood and before their mental breakdown, 85% were "very disorganized," that is, they were unable to carry on a moderately reasonable conversation and had markedly grandiose delusions.

In contrast were those who had shut themselves off from outside contacts. Only 35% of these were very disorganized.

The rate of discharge from the hospital is higher for those with the least bizarre symptoms, the physicians point out.

The results of the study, which are in contradiction to widely held ideas about self-isolation, are published in the JOURNAL OF PERSONALITY. (Sept.)

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ANTHROPOLOGY

Mexican 11,000 Years Old

Age of peat layers in which the bones of Tepexpan man were found has been determined by radiocarbon content. Mammoths and prehistoric horses in same site.

➤ THE OLDEST Mexican so far unearthed in archaeological excavations is about 11,000 years old, Dr. Helmut de Terra, discoverer of Tepexpan man, contends in a communication to the journal SCIENCE (Feb. 2).

Determination of the age of peat layers, in which the ancient bones were discovered not far from Mexico City, by means of their radiocarbon content shows this antiquity, Dr. de Terra, now with the Museum of New Mexico, reports.

Radiocarbon dates of plant root material from the same site showed the more recent age of about 4,200 years but Dr. de Terra explains that these roots were grown in an earth layer above the one in which the

fossil man was found. Mammoths and prehistoric horses, whose remains are found along with Tepexpan man, were extinct in Mexico much earlier.

Mexico had a fire-using culture at least as early as 6,400 years ago, other radiocarbon tests by the University of Chicago's Institute for Nuclear Studies show. Charcoal from a preceramic layer is dated this early, and this was earlier than the appearance of organized farming by about 3,000 years.

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Candy is important in the armed services because much nourishment is packed in a small and easily carried form.