

## MEDICINE

# Morphine Substitute Made

**Synthetic drug is more powerful than morphine and can be manufactured in U. S., thus insuring a supply of a pain-killing drug. It is habit-forming.**

➤ HUNDREDS of patients have been relieved of pain during this past year by a new synthetic drug under trial as a substitute for morphine. Your doctor will probably be using it soon.

The new drug is two to four times as potent a pain-killer as morphine. It has the further advantage of being a synthetic chemical. This means it can be manufactured here in the United States.

If there is trouble in Turkey or elsewhere in the East that cuts off our supply of opium, as the last war cut off our supply of quinine, patients with cancer, gallstones and excruciatingly painful diseases of the blood vessels will not have to suffer because of a lack of an effective pain-relieving drug.

Its chief, if not only, disadvantage is that it can be habit-forming, somewhat as morphine is.

The new drug has been known by three different names: amidone, dolophine and 10820. American manufacturers may give it still other names. Its chemical name is a real jaw-breaker: 4-4-diphenyl - 6 - dimethylamino-heptanone-3.

## War-Time Product

It was first made during World War II by chemists at the I. G. Farbenindustrie in Germany. Our intelligence officers heard in 1943 that the Germans were working on a synthetic morphine substitute, but they got no further information until after the occupation of Germany. Then, in 1945, an Army Medical Corps team investigating the German drug industry picked it up and brought some back to the United States. Chemists, pharmacologists and other medical scientists started making and studying it.

Their studies were kept pretty hush-hush. All of them were worried about whether the new drug could cause addiction as morphine can. Until they could be sure, they did not want any of it finding its way to the market, legitimate or illicit.

Federal authorities in the Bureau of Narcotics and the Public Health Service were particularly worried. They did not

want to see the history of heroin and demerol repeated.

Heroin is a chemical relative of morphine. When it was first introduced it was supposed not to be habit-forming. It turned out to be the worst of all drugs in this respect and its importation into the United States is now illegal.

## Demerol Not from Opium

Demerol, unlike heroin and morphine, is not derived from opium. It is another synthetic chemical which came out of Germany just before the war. It was widely publicized as being without addiction properties. It went on the market without being under control of the narcotic law and doctors began using it. They read accounts of its safety, missed seeing reports casting doubt on this. And a lot of demerol addicts turned up at the Public Health Service Hospital in Lexington, Ky. Popularly known as the "narcotic farm," this is the federal institution for the study and treatment of narcotic drug addiction.

It took a fight and an act of Congress to get demerol under control as an addiction, or habit-forming, drug.

Amidone, like demerol, is not derived from opium. But scientists at the U. S. Public Health Service have found that it is similar to morphine and other opiate drugs in its ability to produce addiction in animals and man.

It gives morphine addicts the same "bang," the same pleasant feeling of exhilaration as morphine itself does. When given over long periods of time physical dependence on the drug developed so that it had to be continued to prevent a characteristic withdrawal illness. But it relieves and prevents the appearance of symptoms of the illness seen after morphine addicts have their drug taken away from them. It may therefore be valuable not only for relieving pain but for treating the withdrawal sickness from morphine.

The Public Health Service authorities consider amidone a useful drug for relief of pain, particularly when a pain-killer has to be given over long periods

of time. But they believe that unless its manufacture and use are controlled, addiction to amidone will become a "serious public health problem."

Some doctors who have been using it have reported that they did not see any signs of addiction to the drug. But this does not mean that the drug cannot cause addiction or a drug habit. In these cases the drug was not used for long enough periods to learn whether or not it would cause addiction. Many of the doctors who have been using it on trial have been chiefly interested in determining its value in relieving pain and in learning whether it had objectionable features such as causing nausea, drowsiness and dizziness, heart symptoms or sensitivity reactions. For the most part, it did not.

The drug can be given by mouth or by hypodermic injection under the skin, into the muscles or into the veins.

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## CHEMISTRY

## First Ipatieff Chemistry Prize Awarded To Dr. Schmerling

➤ FIRST AWARD of the Ipatieff Prize in chemistry has been made to Dr. Louis Schmerling of the Universal Oil Company.

Dr. Vladimir N. Ipatieff, director of the Ipatieff High Pressure and Catalytic Laboratory at Northwestern University, will present the \$3,000 award and a certificate to Dr. Schmerling on Sept. 15 at the American Chemical Society's national meeting in New York. Dr. Schmerling was cited for his work in the chemistry of petroleum and natural gas.

The prize, established by Dr. and Mrs. Ipatieff, will be given every three years to a chemist under 40 years of age for outstanding studies with high pressures or catalysts.

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## INVENTION

## Canvas Holds Body Armor

➤ NOVEL body armor is the subject of patent 2,424,985, issued to Dana C. Howard of the Army's Springfield Armory and licensed royalty-free to the government. It consists of a canvas holder covering the front of the body, with horizontal pockets into which overlapping V-shaped metal plates can be inserted.

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California produces 99% of the *olives* grown in the United States.