

laboratory tests confirm that, despite its potency and long activity, BC-2605 is free from harmful side-effects.

One of the best narcotic antagonists at present is naloxone, which was first considered extraordinary. One part of the compound was able to block the effects of 100 parts of heroin. It produced no hallucinations, even at very high doses. In fact, it was even able to counteract and reverse hallucinations produced by all the other narcotic antagonists. Naloxone abolished respiratory depression, nausea, constipation, convulsions and all other effects produced by narcotics and narcotic antagonists. It was found to be a "pure" antagonist with no potential for addiction.

COMPARISON TO NALOXONE

Naloxone would appear to be an ideal narcotic antagonist, except that it is short-acting (its blocking effects are usually gone after two or three hours). In order to protect an addict from heroin challenge for 24 hours, huge oral doses of one to three grams a day are required. At these dose levels, naloxone would be extremely expensive and in short supply.

BC-2605, on the other hand, is long-acting and requires only low dosage to work effectively. It is synthesized in nine steps from anisole, a relatively cheap, easily accessible starting material. This is in marked contrast to naloxone, which is made from thebaine, a rare alkaloid from the extract of opium. This constitutes another severe disadvantage. As Dr. Perron points out: "The more naloxone you want, the more opium you need to make available, but the more opium, the more morphine and the greater the possibility for heroin. You defeat the purpose."

BC-2605's structure was known to chemists for over a decade as 14-hydroxy cyclophane, but there was no way of synthesizing the complex molecule until Bristol did it in March 1971. The synthesis was based on an idea from Professor Bernard Belleau, of McGill University, Montreal, and the consulting head of research at Bristol. It was accomplished by Dr. Ivo Monkovic, senior research chemist at Bristol, assisted by Henry Wong, a research scientist at Bristol.

Chemists, biochemists and pharmacologists in specialized laboratories are now studying the manufacture of tiny bio-degradable sacs which would be filled with BC-2605 and would disintegrate in the body, slowly releasing the antagonist. Calculations show that 45 milligrams of the antagonist should furnish protection for three months if released slowly enough. In effect, this would be a vaccine against addiction.

The antagonist will also provide a check on those who seek methadone, claiming they are heroin addicts. An addict will show withdrawal symptoms when the antagonist is administered, whereas the non-addict will undergo no change.

Death is not kind to the heroin addict. Symptoms of an overdose of the pure opiate are coma, shock, and ultimately, respiratory arrest and death. The

impure opiate or contaminated instruments of the street-user are often at the root of hepatitis, tetanus, heart and lung abnormalities which, without adequate medical care, spell death. For some addicts, sudden collapse and death have been reported following a single intravenous injection - owing, probably, to contaminants and lethal impurities in the drug sample or perhaps to an overdose of heroin that resulted from the erratic dilution and make-up of the drugs obtained from the "black market".

Death is not kind either to the addict's newborn child. Babies born of dependent mothers also are physically dependent on the drug and may die if withdrawal symptoms are not recognized and treated soon after birth.

Thanks to Bristol's BC-2605 the future for the heroin addict looks a little brighter.

TRADE WITH BRITAIN

When Britain has joined the European Economic Community Canada will be Britain's second-largest export market outside the EEC and its free-trade associates, British Trade Minister Michael Noole stated recently.

Addressing a meeting of the Canada-Britain Chamber of Commerce in London, Mr. Noble said that British exports to Canada had grown "spectacularly" during the past two or three years: "L288 million in 1970, L349 million in 1971 and already L273 million this year - a rate which, if continued, would give a total of L346 million." According to Mr. Noole, Canada was Britain's tenth market in 1970, the ninth in 1971 and, so far, the eighth in 1972.

Mr. Noole continued:

"All this indicates clearly the importance of each market to the other. Canada is our eighth market, we are Canada's second. We are one of Canada's best markets for manufactured goods, while raw materials - Canada's historic strength and likely to remain so for the foreseeable future, however great may be her industrial development - will be the key to the expansion of the industries of the Community, as much as any in the world.

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"We look to our membership of the Community and all that follows from the establishment of a home market larger than that of the U.S.A. to stimulate in us a rate of growth such as the Community has enjoyed. This growth will enormously enhance our dependence on foreign trade, not just with Europe but with all the countries of the world. Canada, with her vast natural resources, her high level of economic development and her rapidly-expanding economy, not to mention her close trading ties with Britain, must be particularly advantageously situated to reap the fullest benefit from the new situation just as she will be the sort of trading partner we shall need and want to have...."