New Center To Study Therapies and Ethnicity

The NIMH is funding research on how different groups respond to medications for mental disorders

IN 1974 KEH-MING LIN, A YOUNG PSYCHIATRIST from Taiwan, arrived in Seattle to pursue his residency at the University of Washington. One of the first things he noticed was that in treating patients with schizophrenic psychoses, the dosages of the anti-schizophrenic drug haloperidol required to relieve the symptoms of his Caucasian patients were more than 10 times as high as the 2 milligram doses he was accustomed to administering in Taiwan.

"I was very surprised and very worried," says Lin. What he was seeing was a phenomenon he has been among the first to observe—that Asians often require far lower doses of psychotropic drugs than do Caucasians.

It has long been known that there are differences in racial and ethnic susceptibility to a variety of physical disorders such as sickle cell anemia and Tay-Sachs disease. Now, a small but growing body of research, pioneered by Lin, is showing that there are also differences in how various groups respond to the therapeutic drugs used to treat major mental disorders.

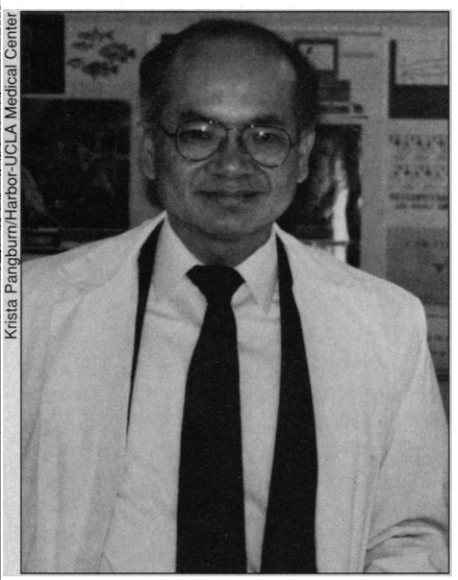
In recognition of these disparities, the National Institute of Mental Health (NIMH) has awarded $1.4 million for a new Research Center on the Psychobiology of Ethnicity—headed by Lin—at the Harbor-University of Los Angeles Medical Center in Torrance.

The NIMH already funds a half-dozen centers that do research and treatment targeted to the needs of particular ethnic groups. Like the other centers, the new one will examine the cultural factors that influence patient evaluation, care, and use of mental health services. But the Torrance center is unique in that its primary research focus will be to explore what Lin calls "the very strong evidence" that ethnicity is a "significant variable" in how people respond to drugs for treating mental disorders. Says Lin: "What is an 'ordinary' dose of medicine for one individual or ethnic group may be much too small to be effective in one instance, or an 'overdose' which produces serious side effects in others."

Although the data are still sparse, there is evidence that—as Lin found with his schizophrenic patients—Asians respond to smaller amounts of some drugs than other groups do. For example, in a study comparing the effects of haloperidol and benzodiazapines (tranquilizers) on Asians and Caucasians, Lin observed that Asians required lower blood levels to achieve the same therapeutic effects. Another study, with people in Japan and Taiwan, suggests the same phenomenon with lithium, which is used to treat manic depression.

According to Lin, several genetically influenced biological systems could be implicated in the differential effects of drugs. There are known to be racial variations in metabolism, as shown by the well-known enzyme deficiency in many Orientals that limits their ability to metabolize alcohol. But Lin says there could also be differences among ethnic groups in the way proteins bind in the blood, or—an "even more intriguing and difficult" possibility—in brain receptor responses to drugs.

But environmental differences are also implicated, according to studies done in the late 1970s. Investigations by British and Indian researchers comparing three groups—Caucasians, Sudanese in Britain, and Sudanese in their native villages—showed that the last group took longer to metabolize antipyrine, a little used local analgesic that activates the same enzymes involved in the metabolism of psychotropic drugs. There were no differences, however, between the Caucasians and Sudanese in Britain—suggesting that the environment, perhaps in the form of diet, accounted for the reaction to the drug. That implication is backed by another study with the same drug in which Asian Indians in Britain took longer than Caucasians to clear the drug—but when the Indians were divided according to dietary practices, those who had adopted English eating habits showed no differences.



Krista Pangburn/Harbor-UCLA Medical Center

Headman. *Keh-Ming Lin, director of the new NIMH-funded center on psychobiology and ethnic groups.*

How different groups respond to drugs is only one line of research that will go on at the new center. Researchers there will also be looking into "culture bound syndromes" that may be seen increasingly with the influx of new immigrants. Some rare and dramatic syndromes include "running amok," a term originating in Malaysia, in which individuals occasionally go on random killing sprees, and "koro," an unusual Chinese condition in which young males suffering severe sexual anxiety believe their penises are shrinking and retreating into their abdomens. Less dramatic syndromes, says Lin, include beliefs by Southern blacks that they have been subjected to voodoo hexes, and anxiety attacks among Hispanics who believe their souls have wandered out of their bodies.

Other projects will include: research on how different groups conceptualize routine psychiatric disorders; a study of "somatization," the process by which some people interpret their mental disorders as physical; and a cross-national study of "neurasthenia," a term that mainly signifies chronic weakness. That diagnosis has long gone out of style in the West, but the Chinese still adhere to it. Now, says Lin, it appears that it may be valid after all—reappearing as the currently in vogue "chronic fatigue syndrome."

Anything that touches on biological differences among ethnic groups is likely to be controversial. But so far, says Alan Leshner, acting director of NIMH, no one has suggested it is inappropriate to do the kind of biological research for which the Torrance center is funded. In fact, says endocrinologist Ronald Swerdloff of UCLA, who heads studies on hormone bioavailability and metabolism for the development of male contraceptives, "We have to justify why we are not including various racial groups in studies."

Responding to the possibility that investigation of race and ethnicity might remind some of the Third Reich, Leshner says: "We are not looking at the biology of race differences. We are looking at how different ethnic groups respond to treatment for severe mental illnesses known to have biological correlates. What's important is that a center like this will influence practice directly so people will get more appropriate treatment."

■ CONSTANCE HOLDEN