by Louis S. Goodman and Alfred Gilman. I refer you to pages 299 and 300 of this volume.

It should be made clear, however, that no one in the scientific or medical communities is satisfied with the level of knowledge we have concerning marihuana and similar drugs. As I have stated on several occasions, there is still much research to be done.

For example, the chemical composition of marihuana has not been fully determined, although what seems to be the plant's most active ingredients have been isolated and synthesized.

Scientifically controlled marihuana studies of varying lengths have not been conducted on animals or humans to determine effects on body tissue and metabolism, or neuromuscular response, and on psychological, and cultural reasons for marihuana use, especially among our young people. The number and characteristics of marihuana users in the United States are virtually unknown, and paths to such use are unexplored.

Mr. Chairman, there are a number of studies that are being conducted under the auspices of the National Institute of Mental Health. I would like to deposit with the committee at this time a recent listing by the NIMH of their marihuana research and related grant activities.

(The document referred to follows:)

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE, NATIONAL INSTITUTE OF MENTAL HEALTH

(For release Thursday, October 26, 1967)

The National Institute of Mental Health today issued a summary of Institute-supported research related to marijuana and its components. The summary follows:

Eugene S. Boyd, University of Rochester, N.Y.—Investigation of the effects of marijuana components on the central nervous system of human subjects. Start September 1, 1960; $167,773.

Hine Laboratories, San Francisco—Development and investigation of tests to determine the presence of marijuana in blood and urine. Start March 1, 1967; $70,700.

Raphael Mechoulam, Hebrew University, Jerusalem—Synthesis of marijuana constituents and a study of their physiological and psychological effects. Start March 1, 1967; $26,500.

Constandinos J. Miras, University of Athens—Use of radio-active tagged marijuana to determine absorption, distribution, site of action and excretion of marijuana in the body of experimental animals. Start March 1, 1967; $14,000.

Lloyd J. Dolby, University of Oregon—A study of the chemical nature of selected marijuana components. Start September 1, 1965; $13,699.

Dean I. Manheimer, Longley-Porter Neuropsychiatric Institute; San Francisco—Research on patterns of drug acquisition, drug use and attitudes toward drugs by adults. (West Coast). Start June 1, 1966; $285,931.

Ira Cisin, George Washington University, Washington, D.C.—Research on patterns of drug acquisition, drug use and attitudes toward drugs by adults, (East Coast). Start June 1, 1966; $107,337.

Martin Hoffman, Mount Zion Hospital and Medical Center—San Francisco—Psychological and psychiatric studies of marijuana smokers. Start September 1, 1965; $64,751.

Richard Blum, Stanford University—An investigation of the incidence and patterns of use of marijuana and other mind-altering drugs by college students. Start March 1, 1966; $78,524.

Ross Speck, Hahnemann Medical College, Philadelphia—Investigation of adolescent drug users and of the spread of drug use among adolescents. Start June 1, 1966; $49,734.

National Student Association, Washington, D.C.—Exchange of information on the motives for, and extent and consequences of, drug use by college students