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CHEMICAL AND PHARMACOLOGICAL STUDIES

*The strength and quality of cannabis products was always a problem to the pharmaceutical industry. Before the 1900s, the drug industry was dependent on shipments from India. The shipments varied in strength. To make up **for** a lack of chemical assay techniques, the industry developed highly sophisticated animal assay criteria for purposes of standardization.*

In the early twentieth century, the industry began marijuana cultivation for medicinal purposes in suburban Philadelphia and at Rochester, Michigan. Parke Davis and Eli Lilly collaborated in the development of standardized domestic strains of marijuana to U.S. Pharmacopoeia standards. This laboratory came into being in 1918 and was closed in 1938, a year after the new drug laws called for the proof of safety of marijuana preparations.

1887: Hare provides a summary of current therapeutic applications, his clinical observations and speculation as to the mechanism of cannabis analgesia, before describing his animal studies.

1898: Marshall describes a method for refining Red oil and other more potent active components from charas. He studies the effects on animals, noting it to be non-toxic. While recommending it therapeutically as a sedative hypnotic, he cautioned against its habitual use-after making and personally using various cannabis derivatives at high oral dosage thirty-three times over a period of two and a half years.

The 1918 twentieth edition of The Dispensatory of the U.S.A. described the state of the art of pharmaceutical treatment of crude U.S. and imported cannabis products.

Little significant pharmacochemical research was done until the work by Walton, Loewe, and Adams in the late thirties.

Adams in 1942 reported his chemical studies, describing chemical structures of the active principles of cannabis and of his and his friends' personal experiences on tetrahydrocannabinol synthesized in his laboratory. He also summarizes findings of medical and psychiatric studies on prisoner patients.

Loewe is concerned with chemical Structure and Activity Relationships (SAR). He reviews psychological and physiological responses with regard to possible therapeutic applications of different THC homologs. In a highly detailed fashion he describes evaluation of an ticonvulsant, hypno tic and analgesic properties of marijuana homologs in his animal experiments.

Sbulgin ends the section with a complicated discussion of the chemistry of cannabis congeners and their derivatives.
