

SUMMARY OF THE TESTIMONY

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OF ROBERT C. HOCKETT, PH.D.

BEFORE THE SENATE COMMERCE COMMITTEE

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"The Council for Tobacco Research does not operate any laboratories of its own. It has felt that its greatest contribution to scientific research and to increased knowledge is through the medium of grants and other types of financial aid to individual investigators in independent institutions." (P. 4)

"My purpose is to briefly describe some of The Council's achievements and findings over the last ten years." (P. 4)

"The number of diseases associated with cigarette smoking is a stumbling block to acceptance of a causal hypothesis. To many this lack of specificity is an obstacle suggesting that something, somewhere, is amiss in the findings." (P. 11)

"A major difficulty with attempts to deduce a causal connection from the statistical association between cigarette smoking and the incidence of various types of cancer, especially carcinoma of the lung, is that there are a number of other non-causal reasons for the existence of such an association which can be postulated and must be excluded before any judgment can be reached." (P. 6)

"Because the explanatory hypothesis originally advanced was the possibility that tobacco smoke might have activity as a direct contact carcinogen, a large number of studies have been sponsored in the effort to develop reliable and quantitative methods for assessing such possible activity in comparison with that of other substances and mixtures that are common in the environment and whose tumorigenic action is better known." (P. 6)

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"The results fail to support the hypothesis that cigarette smoke can act as a direct contact carcinogen in the human lung. Study is continuing with respect to other hypothetically possible modes of action." (P. 7)

"The Council has allocated a substantial grants fund for studying the cardiovascular system in health and disease and for investigating any short or long-term effects of smoking and of nicotine upon this system." (P. 9)

"Though many transient effects have been more fully measured and described in our program, no evidence of any significant contribution by smoking or nicotine to causation, aggravation or precipitation of any cardiovascular disease that contributes importantly to mortality has emerged." (P. 9)

"The Council's studies of such chronic diseases as the various forms of bronchitis, asthma and emphysema are directed toward better defining the various clinical entities involved, developing reliable methods for differential diagnosis and studying the natural history or course of development of each individual disease. These problems must be solved before real progress in the study of causative factors can be expected." (P. 9)

"... it is the considered conclusion of pharmacologists who have studied the accumulated information about the physiological effects and rapid metabolism of nicotine that it has no known chronic or cumulative effects." (p. 14)

"It has never been seriously suggested that nicotine has any carcinogenic properties." (P. 14)

"There have already been a considerable number of experiments involving the frequent and long-term inhalation of cigarette smoke by several animal species. In the words of one investigator, these have added up to a "striking negative result." (P. 19)

"One of the most important developments of the past few years has been the production of lung cancers of the prevalent human type in mice by a combination

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of virus damage with subsequent long-term inhalation of a sufficiently potent carcinogenic smog. This may open the way, experimentally, to productive study of many other factors as they may contribute, directly or indirectly, to the final result. Among such are the possible effects of hormone excesses or deficiencies, dietary deficiencies, liver damage, composition and abundance of mucus, activity of phagocytes and many others." (P. 21)

"Whatever external factors may be implicated, it appears quite evident from the statistics themselves that only some small fraction of the total population is really susceptible to this disease while the great majority seem to be quite resistant." (P. 21)

"Statisticians agree that causation cannot be inferred reliably from association. Corroboration is essential. In the absence of corroboratory clinical and experimental evidence, judgments that cigarette smoking is a major factor contributing importantly to mortality would seem to go beyond the realm of scientific conclusions, and to contain a considerable element of guess and gamble." (P. 21)

