

Abstracts

The Tri-Service Program--A Tribute to George M. Knauf, USAF (MC)

S.M. Michaelson. "The Tri-Service Program--A Tribute to George M. Knauf, USAF (MC)." 1971 Transactions on Microwave Theory and Techniques 19.2 (Feb. 1971 [T-MTT] (Special Issue on Biological Effects of Microwaves)): 131-146.

During World War II, the Department of Defense medical services became interested and concerned about possible hazards associated with the development, operation, and maintenance of the increasing numbers of radars and other radio-frequency emitting electronic equipment. After some investigations by the U. S. Navy and the U. S. Air Force, responsibility for research on the biomedical aspects of microwave radiation was delegated in July, 1957, as a tri-service arrangement to Rome Air Development Center, Griffiss Air Force Base, N. Y. Primary responsibility for coordination of the program rested with Dr. George M. Knauf, USAF (MC). The Tri-Service Program included investigation of effects of exposure of the whole-body, selected organs and tissues, single cells, and enzyme systems using various power levels, pulsed and continuous wave, in the frequency spectrum from 200 through 24 500 MHz under acute, subacute, and chronic conditions. The most important contribution of the Tri-Service Program was the validation of the 10-mW/cm safety standard. The Tri-Service Program is to date the only large-scale coordinated effort in the Western world to elucidate and understand some of the basic mechanisms of microwave bioeffects and to assess possible health implications of this form of energy. This paper constitutes an overview of the Tri-Service Program to provide some historical insight into the significance of the program and its contributions to our understanding of the biologic effects of microwaves. The initiative, foresight, and drive of Colonel Knauf was an immeasurable contribution to the success of the program.

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