IN RE: ABRAMS November 1992

of the first compounds reported to protect living systems. The thiol and amine groups of this molecule have been the focus of much interest. It has been pointed out that beta-substituted ethylamine groups are common to a number of good protective agents in mice. The protective action of aminoalkylisothiuronium salts depends on their ability to rearrange into the corresponding mercaptoalkylguanidines in which a thiol (—SH) group is exposed. These compounds increase the mean longevity of animals, prevent induction of leukemia, and protect against death; they do not prevent nephrosclerosis, loss of fur color, or cataract formation. Cysteamine protects animals from death following an acute radiation dose but does not protect against genetic damage or sterility. Some of the most active industrial investigations of chemical protection have been on lubricants for nuclear-powered equipment. Chemical protection was investigated for decreasing the radiation effects on elastomers and plastics, glass, ion-exchange resins, the sterilization of food and medicinal products, and radiation-induced reaction products. -- Cond. from Nuclear Sci. Absts.

996 Medical Reactors. A Review of U.S. Program. Anon. Nuclear Eng. 5, 205-209 (May 1960).

A survey of the medical and biological research program of the United States Atomic Energy Commission is presented. The various applications of irradiation and radioisotopes in medicine are briefly described, and the subject of medical research reactors is discussed. Such reactors presently operating in the United States, e.g., at Los Angeles, Massachusetts Institute of Technology, Washington, Brookhaven, and Oak Ridge, are described. -- Nuclear Sci. Absts.

997 Radiation Protection Standards. L. S. Taylor. Radiology 74, 824-831 (May 1960).

A review is presented of criteria for radiation protection standards. Permissible dose levels are discussed. -- Nuclear Sci. Absts.

998 The Influence of Radiation on Recovery. J. B. Hartgering. Military Med. 123, 210-215 (Sept. 1959).

The radiation component of nuclear weapons introduces a new type of injury with which there has been no previous battlefield experience. All recent operations analyses have emphasized that ionizing radiation will be the most important primary and complicating cause of military casualties in the event of nuclear war. Some of the implications of radiation on the clinical course and medical management of familiar injuries and diseases are discussed. The need is stressed for research on the clinical aspects of the combined effects of radiation and injury. The interest of the military in time of war will not be in whether or not the combination reacts synergistically with doubling or tripling sensitivity, but how these effects can be modified to protect more individuals and return more men rapidly to the combat command. -- Nuclear Sci. Absts.

999 Fallout—One of Several Sources of Radiation Exposure to the Total Population. C. L. Dunham. J. Nuclear Med. 1, 50-55 (Jan. 1960).

The biological consequences of radioactive fallout from nuclear weapons tests are discussed. It is pointed out that actual data are practically non-existent on the effects in humans of radiation exposures involving the low total doses and low dose rates associated with present levels of fallout. Any exposure to radiation may be assumed to involve some degree of risk and is therefore undesirable unless there is adequate reason for the exposure. Standards for the evaluation of risk from fallout are discussed. -- Nuclear Sci. Absts.

03120643