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Department of Defense
THE RESEARCH AND DEVELOPMENT BOARD
COMMITTEE ON MEDICAL SCIENCES
Washington 25, D. C.

MB 8/6

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LIST OF CURRENT RESEARCH AND DEVELOPMENT PROJECTS
IN MEDICAL SCIENCES

CLASSIFIED BY MASTER PLAN TECHNICAL OBJECTIVES

November 1949

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MB 8/6

AW - 6

Techniques and equipment for solution of medical problems
encountered in radiological warfare
(Also of interest to Committee on Atomic Energy)

1. Tolerance to Radioactivity

659 080 03	Atomic bomb, medical aspects of
659 080 5	Ionization effects on experimental animals and human subjects
664 060 2	Radiation chemistry of organic molecules in solution
664 090 4	Acute effect of radium chloride upon hemopoietic organs of the white rat
NM 001 051	Some conclusions and calculations from the present day knowledge of cosmic radiation with regard to the actual radiation exposure in high altitude flight
NM 001 052	Measurements of the radiation and emanation doses from luminous paint on instrument dials in airplanes
NM 007 039	The medical aspects of thermal and ionizing radiations
NM 008 009	Effects of radiation on oral tissues, structures and fluids
NM 013 011	Design and construction of a large animal irradiator
NR 110 758	Physiologic and pathologic effects of radioactive cobalt
NR 113 808	Effects of exposure to radioactive material and to x-ray irradiation on nerve tissue
NR 171 184	Biological effects of ionization produced in tissue by ionizing particles
NR 171 256	The design and construction of a microbeam of "light atomic nuclei for biological investigations"
NR 171 340	Biological effects of radiation on neurospora
NR 171 556	Response of cells (desquamate) to deep radiation
NR 171 581	Biological effects of high voltage radiation
NR 171 659	Skin changes produced by low voltage roentgen ray irradiation

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MB 8/6

AW - 6

1. Tolerance to Radioactivity -- continued

- NR 171 823 Dosage curves under varying conditions of time and intensity of radiation
- NR 171 827 Studies of distribution of isotopes in therapy with particular reference to radioiodine
- NS 083 004 Lethal and sublethal dose studies - acute and chronic exposures to internal radiation
- NS 083 005 Physiological and histological effects of ionizing radiations
- NS 083 006 Biochemical changes following irradiation
- NS 083 007 Studies of maximum permissible dosage of radiation
- NS 083 008 Maximum permissible dosage manual -- preparation for field use

2. Protection Against Radioactivity

- 659 080 6 Radiation injury in animals and man
- NR 171 858 Comparison of the effects of x-rays, neutrons, and mustard compounds on the growth and development of the corn seedling

3. Decontamination of Personnel

4. Treatment of Radiation Casualties

- 659 080 01 Prevention of growth of hair in skin grafts
- 659 080 04 Surgical procedures required for treatment of radiation and thermal burns
- NM 007 065 Radiation sickness
- NS 083 009 Radiation illness -- clinical diagnosis
- NS 083 010 Influence of pharmacological agents upon the effects of irradiation
- 210 209 6 Bone marrow implants in the treatment of radiation sickness

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MB 8/6

SR - 13

Supporting research and development

1. Anatomy

764 020 01 Anthropometric survey
NR 115 182 Quantitative measurements of cells and cell types

2. Biology

NR 122 725 Translocation of mineral substances in plant
NR 130 067 Germ-free animals
NR 132 380 Taxonomy of decapod crustaceans

3. Biophysics

NM 000 012 Effects of cosmic radiation on biological and colloidal materials in suspensions
NR 010 501 Biological applications of theoretical physics
NR 171 105 Medical research in nuclear physics
NR 171 554 Radioactive isotopes and mass spectrometry
NR 171 604 Radioautographs
NR 171 624 The biological effects of radioactive sulphur
NR 171 642 Body retention of carbon 14
NR 171 645 Radiomedicine research
NR 171 653 The effects of radiations associated with growth
NR 171 679 Biological effects of radiation from excessive amounts of 1131
NR 171 680 Establishment of a radioisotope unit at Northwestern University Medical School
NR 171 783 Radiation chemistry of bacteriophage invasion and reproduction in host cells
NR 171 785 Localization of radioactive isotopes in reproductive and germinal tissues
NR 171 888 Bactericidal effects of high energy radiation
NR 171 900 Research in radioautography
NR 172 001 Destruction of the living cell by the direct electric current

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