

Office Memorandum • UNITED STATES GOVERNMENT

BRUNER + Staff

TO : MEMO FOR THE RECORD

DATE: July 30, 1959
720991

FROM : Lt. Col. Charles M. Barnes

SUBJECT: Life Sciences Working Group

BEST COPY AVAILABLE

The ANP Life Sciences Working Group met on 12 and 13 May 1959 at Idaho Test Division, LANCO, Idaho Falls, Idaho. The agenda for this meeting is attached. The following recommendations resulted from this meeting:

KIWI-A

It is recommended that light aircraft equipped to do air sampling be used in the KIWI-A field test at Jackass Flats. The use of B-57 type aircraft are not warranted nor do they appear useful for sampling in this instance.

FIELD RELEASE TESTS

It is recommended that diffusion of fluorescent dyes be conducted in the current series of field release tests. This would correspond to theoretical work now under way at Hanford Atomic Products Operation by the Cambridge Research Center and would correlate the two experiments. It is recommended that consideration be given to the use of the whole body counter at the University of Utah Medical School's AEC project which could be utilized to determine the total body burden of fission products in dogs. It is recommended that some type of biological monitor be utilized on each of the nine field release tests to be conducted this summer. It would seem reasonable that the contractor (University of Rochester) might wish to focus their activities on two or three tests but it is important that every release be monitored with biological experiments.

LOCKHEED RER

Consideration was given to the possibility of initiating some long term chronic experimentations in the area immediately surrounding the radiation effects reactor at Dawsonville, Georgia. The ANPO has only one research project which includes experimentation with neutrons in total body exposure; (monkeys) This is a more or less monoenergetic 2.5 Mev Po Be neutron. The Atomic Energy Commission does not have any large animal neutron experimentation under way. It is suggested that about 100 goats be placed within the personnel barrier and maintained indefinitely allowing the animals to reproduce at will; examination being made of the off-spring and occasionally original animals. This would simulate in many respects the environmental situation around nuclear air bases since not only will the animals get a direct dose of both neutrons and gamma rays but will also be eating contaminated forage and plants grown on activated soil.

MEDICINE, HEALTH & SAFETY - 2

US DOE ARCHIVES	
326 U.S. ATOMIC ENERGY COMMISSION	
RG	
Collective	DBm
Box	3373
Folder	21

1154353

NEURO PHYSIOLOGY

It is recommended that studies be conducted in man in accordance with established criteria and previous experiments at M. D. Anderson Hospital. It is understood that relatively normal people are irradiated with relatively large doses of X-ray to the head from time to time in departments of radiology or hospitals throughout the country. It is suggested that these hospitals be encouraged to initiate psychological testing on these individuals before and after irradiation. These data could be correlated with the experiments at the University of Minnesota on donkeys.

FISSION PRODUCT TOXICITY

It is recommended that studies be initiated on toxicity of fission products which have not previously been studied. These products originating from ANP reactors may be unique either in basic fission product involved or the chemical nature of the material.

CORRELATION OF DATA FROM CHRONICALLY IRRADIATED ANIMAL COLONIES

It is recommended that specialists in ophthalmology, hematology, genetics, geriatrics, statistics and experimental design, neurophysiology, pathology, etc., be used as consultants to all of the experimental animal colonies which are being used in biological work in ANP. These consultants would travel from colony to colony examining the experimental animals in a similar manner and correlating the results. The data derived will thus be meaningful for several species under various conditions and more easily extrapolated to man.

CHRONIC IODINE EXPERIMENTS

It is recommended that at least one experimental group of large animals be given a therapeutic dose of radio iodine and maintained for their life span. Iodine is a limiting isotope in the toxicology study of fission products of importance to ANP.