NOTICE

**CERTAIN DATA
CONTAINED IN THIS
DOCUMENT MAY BE
DIFFICULT TO READ
IN MICROFICHE
PRODUCTS.**

DECLASSIFIED

HW--15108

DE92 010913

- 1 -

RECEIVED

MAY 28 1956

300 AREA
CLASSIFIED FILES

- Copy # 1 - H. M. Parker
2 - H. A. Kornberg
3 - 300 File
4 - 700 File
5 - Pink File
6 - Yellow File

RECORD CENTER FILE

This document consists of
COPY 1 OF 1, 7 pages, # 6 of
6 Copies, [REDACTED]

MEETING OF LABORATORY AND MEDICAL DIRECTORS, OCTOBER 21 AND 22, 1949
DOWNER LABORATORY, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIFORNIA

Classification Cancelled (Change to
DECLASSIFIED)

By Authority of _____

BF O'Meara 3-9-73

by Im Eick 3-5-92

Verified by DA Burk 3-6-92

By: H. A. Kornberg

Date: November 15, 1949

REFERENCE COPY

HEALTH INSTRUMENT DIVISIONS

GENERAL ELECTRIC COMPANY

HANFORD WORKS

[REDACTED]
document containing information reflecting
use of United States, its trans-
mission of contents in any manner, in an
is prohibited and may result in severe
multiple under applicable Federal laws.

MASTER

DECLASSIFIED

- 1 -

DISTRIBUTION RESTRICTED TO U.S. ONLY

DECLASSIFIED

RAK-F110

HW-15108

- 2 -

MEETING OF LABORATORY AND MEDICAL DIRECTORS, OCTOBER 21 AND 22, 1949
DONNER LABORATORY, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIFORNIA

The meetings during the two days were, as in the past, divided into two parts, with reviews of work being done in radiobiology at the University of California by various members of their staff as part one, and, as part two, a meeting conducted by Dr. Shields Warren for Laboratory Directors and their representatives.

For the most part papers which were reviewed were summarized material which has appeared in the literature and gave progress to date. Since the purpose of the meeting itself was more for the informal directors meeting, results of the latter are here abstracted, although an attachment is included listing the papers given.

At the opening session, Dr. Warren reviewed the conference at Chalk River and stated that the minutes of the Chalk River conference were to be distributed to each representative who had been present, and that each would then interpret them and send back their condensations for the purpose of eventual agreement on the points considered. He then summarized briefly salient points at the Chalk River conference, but since H. M. Parker has reviewed it at Hanford Works, it is not included here.

Some of the more important problems that require answers were listed by Dr. Warren in order that maximum permissible limits may be more firmly established:

1. Elementary analysis of organs and tissues.
2. Determination of the border-line of effect for isotopes and external radiation.
3. Specific susceptibilities of species and organs with species.

- 2 -

DECLASSIFIED

~~SECRET~~
~~DECLASSIFIED~~

MAX-File

HW-15108

- 3 -

4. Determination of the variation between uptake versus concentration ingested and inhaled radioactive materials (in the latter case, reference was made to critical particle size and in the former, the recent preliminary work indicating that plutonium may be absorbed in greater amounts than previously determined).

Dr. Warren then spent some time discussing the fiscal 1951 budget. He stated that "this is not a binding agreement" and that "no one will be held rigidly to the figures". He suggested that laboratories leave a 20% amount under the heading "Unspecified Research or Unforeseen Problems". He requested that under the breakdown of problems, a brief paragraph descriptive of the work proposed be included. Dr. Warren stressed that "this is only an approximation of what you think you will be doing on a dollar stand-point" and we "will not be held to it by our own business organizations".

It was then pointed out by Dr. Warren that the NSRB was ordered by President Truman to be responsible for civil defense planning but not for its organization. The AEC has been asked to give advice in planning which is not to be considered one of their permanent assignments, but serves as a fill-in until organization is satisfactory. He stated, "Don't let people in AEC become permanently attached. Keep clear of operational function. Only partake in planning." In the case of necessity, emergency teams of 8 to 12 persons per team from installations, contractors, and volunteers will probably be required to establish 1 r and 0.1 r contour lines and then return to their regular job. The NSRB has farmed out some aspects of civil defense to the GSA (General Services Agency) while the National Military Establishment has shown interest but wants no responsibility. The AEC Division of Biology and Medicine (Borman) has organized some emergency teams in which

~~SECRET~~
~~DECLASSIFIED~~

DECLASSIFIED

- 4 -

apparently Derry, in charge of instruments, is a member. In addition to the teams, the Biology and Medicine Division provides (through Bowman) consultation and information to give to science teachers on subjects of radiation injury and instrument operation and repair, most of which is to come from the Weapon Handbook.

The rest of the meeting was devoted to a round table discussion by representatives of other laboratories on the parts they were playing in contributing to therapy for radiation injury.

Dr. Dowdy reviewed some aspects of bacteremia resulting from intestinal fissures caused by radiation. He suggested that therapy should involve a search for bacteria in organs even after the wounds have healed. Mentioned also was Dr. Bennett's work in lowering oxygen tension to prevent radiation injury.* 800 roentgen given two rats, one in an atmosphere containing 20% oxygen, the other in an atmosphere containing 5% oxygen, resulted in the death of the animal in the normal atmosphere. Anoxic animals have not died yet although if anoxia is prolonged, the animals die anyway.

Dr. Ames reported on several problems currently being investigated. It has been found at Argonne that if the spleen of a mouse is shielded during radiation, hyperplasia of the spleen occurs due to ectopic duty. He further discussed the use of toluidine blue in therapy using amounts of 3 to 6 micrograms per kilogram per day to decrease clotting time. Its mechanism is presumably used as an antagonist to heparin-like substances which are released into the blood. The use of cysteine for radiation therapy was mentioned briefly.* In order that it be practical, it would be necessary for a person to take 100 grams of the substance by mouth one-half hour before exposure. Glutathione is satisfactory if given intravenously, while sodium sulfide has no value.

- 1 -

DECLASSIFIED

DECLASSIFIED

HAK-File

HW-15108

- 5 -

Dr. Shipman of Los Alamos reported on some work showing that vitamin B₁₂ was ineffective under the conditions they used for therapy. He reviewed the course of events in their radiation accidents.

Dr. Blair reviewed some work in which aureomycin was found to delay the time when death took place.

Dr. Hollaender briefly reviewed reversal by infra-red radiation of chromosome breaks caused by ionizing radiation. In other work in genetics, it was found that the frequency of radiation-induced chromosome breaks in Tradescantia could be decreased by lowering the partial pressure of oxygen in the atmosphere surrounding the growing plants during irradiation. They have found that ultraviolet light decreases the sensitivity of micro-organisms to X-radiation and also decreases mutation rate.

Dr. Hims briefly reported experiments showing that the water intake of animals exposed to radiation is roughly proportional to the logarithm of the dose and that radiation resulted in a loss of water and sodium.

In conclusion, Dr. Warren stated that the next meeting would probably be held at the Washington office during the week-end of February 3rd and 4th.

H. K. Kumborg

DECLASSIFIED

DECLASSIFIED

HLK-Filo

HW-15108

- 6 -

A. M. C. MEETING

October 21 and 22, 1949

Room 201 -- Donner Laboratory

October 21

Friday

9:00 - 9:15	Introductory Remarks	John H. Lawrence
9:20 - 9:40	Studies on Iron Metabolism	Rex Huff
9:45 - 9:55	Effects of Radiation on Metabolism of Iron	Thomas Hennessey
10:00 - 10:10	Cobalt Polycythemia	Nathaniel Berlin
10:15 - 10:25	Therapy with Colloids	John Gofman
10:30 - 10:40	Studies on Arteriosclerosis	John Gofman
10:45 - 11:00	Studies with Carbon-14	B. Tolbert
11:00 - 11:10	Studies on Photosynthesis	A. Benson
11:10 - 11:20	Discussion	Melvin Calvin
11:20 - 11:35	Circulation Dynamics and Equilibration Rates	Nello Pace
11:40 - 11:50	Liver Circulation	Ernest Dobson
11:55 - 12:10	Genetic Effects of Radiation	Curt Stern

DECLASSIFIED

DECLASSIFIED

NAK-Filo

HW-15108

- 7 -

October 22

Saturday

9:00 - 9:15	Metabolism of Carbon-14 Labeled Compounds	Hardin Jones
9:15 - 9:25	Nucleic Acid Metabolism in Normal & Tumor Animals	Lola Kelly
9:30 - 9:40	Metabolism and Effect of Radio Iodine	E. R. Miller
9:40 - 9:50	Hematological Effects of Radiation	B.V.A. Low-Beer
9:50 - 10:00	Changes in the Lobation Index	Paul Aggeler
10:00 - 10:20	Recent Studies on the Effect of Various Agents in Alteration of Plutonium Deposition in the Skeleton	D. H. Copp
10:25 - 10:35	The Comparative Deposition of Strontium, Promethium, and Plutonium in Cartilage and Bone	C. W. Asling
10:35 - 10:45	Recent Tracer Studies	K. G. Scott
10:45 - 10:55	Radiochemical Preparations	Warren Garrison
10:55 - 11:05	The Effect of Organic Complexing Agents on the Metabolism of Columbium	H. Foreman
11:05 - 11:15	The Destruction of Thyroid Tissue by Astatine	J. G. Hamilton
11:20 - 11:35	Adaptation of the 184-inch Cyclotron to Biologic Studies	C. A. Tobias
11:40 - 12:00	The Biological Effectiveness of High Energy Positive Ions as a Function of their Rate of Energy Loss	Raymond E. Kirklo
12:05 - 12:15	Trace Element Studies	Raymond Wolfe

DECLASSIFIED

END

**DATE
FILMED
5/13/92**