

REPORT OF THE VISITING COMMITTEE FOR THE MEDICAL DEPARTMENT

June 6, 1961

Dr. I. I. Rabi, President
Associated Universities, Inc.
Empire State Building
New York City, N. Y.

718267

Dear Dr. Rabi:

The Medical Visiting Committee met at the Brookhaven Medical Center during the days of May 22 and 23, 1961. The emphasis of this program review was upon the nuclear devices of the Brookhaven National Laboratory and the Medical Department's use of them. The agenda is attached. Dr. Farr, who was called away because of a death in the family, was ably represented by Dr. Victor Bond.

The Committee has great satisfaction with the manner in which the Medical Department has adhered to the principle that the unique facilities of the Laboratory should be fully exploited for biomedical as well as for physical purposes. Close cooperation with physicists and engineers over the years has advanced at a good pace our knowledge of the medical applications of reactors and accelerators. There has resulted in this Medical Center the first reactor designed specifically for medical uses. The experience here will serve as a reliable guide in the future construction of medical reactors elsewhere.

While the reactor is being used for activation analysis, and short-lived isotopes production, the most important application is as a source of neutrons for neutron capture therapy in cancer. We are pleased to learn that it now appears possible to use this method of treatment for some malignant tumors other than those of the central nervous system. The research being prosecuted in this field necessarily faces great technical difficulties but the objectives are of such tremendous importance that we feel that every possible encouragement should be given this program, both in equipment and scientific manpower. Adequate personnel, including a neurosurgeon, should be available at all times.

Other major instruments such as the Van de Graaff accelerator, the 60" cyclotron and the whole body counter are likewise being utilized with great skill and effectiveness. We understand that biological studies at the Cosmotron will be initiated in the near future. This is in line with the Committee's previous recommendation that the biological effects of very high energy particles be explored intensively.

The progress of the program has resulted in the emergence of requirements for additional construction. The Committee is impressed with the value of the studies which have been made possible by the technique of the low level whole body counter. In fact, it has been so useful that the one available facility is being used to capacity.

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The committee therefore strongly supports the request of the Medical Department for construction of space and equipment for an additional facility for all types of low level counting.

At the same time the committee is convinced that other medical institutions will soon require this type of facility. We hope that from the experience with low level counting at Brookhaven there may result improved designs of counters for diagnostic purposes in hospitals and medical schools at comparative modest costs.

A second urgent requirement is for additional animal quarters. This recommendation was made in a previous report, and we wish to reemphasize the pressing need for this addition. The growing attention to lower levels of radiation injury and to protracted time scales greatly increases the number of experimental animals that must be maintained. Preliminary plans are being developed that will approximately double the amount of animal space. We would also suggest that the plans provide for a limited capability to handle pathogen and germ free small animals. Further, the design should permit great flexibility in internal layout to provide for future changes in the pattern of use. We suggest that a modular design be carefully studied.

In connection with the animal space needed, we would like to suggest that the projected animal requirements should be carefully reviewed and related to space in accordance with standard space allotments based on the experience of many laboratories. Efficient housing of animals, combined with good design of structures, should result in excellent quarters at a cost substantially less than is frequently incurred in many installations.

We feel that special praise should be accorded the program of research collaborators who now play such an active role in the Medical Department as well as in other departments of BNL. This not only permits the staff to fulfil a teaching function but further enlarges the associations with participating universities. The program has also encouraged the freer cooperation among members of the Department of Medicine.

Respectfully submitted,

/s/ John C. Bugher

John C. Bugher, M.D., Chairman
Thomas Francis Jr., M. D.
A. Baird Hastings, Ph.D.
Robert A. Moore, M. D.
Bronson S. Ray, M. D.
Joseph E. Smadel, M. D.
W. T. S. Thorp, D. V. M.
Maxwell M. Wintrobe, M. D.

MEDICAL DEPARTMENT VISITING COMMITTEE

May 22-23, 1961

Arrive Sunday evening, May 21 - no events scheduled.

The Devices of Brookhaven and the Medical Department's Use of Them:

Monday

- 9:00 - 9:30 1. Dr. Calvo
Histological Analysis of the Effectiveness of
Neutron Capture Therapy
- 9:30 - 10:00 2. Dr. Yamamoto
Clinical Problems in Neutron Capture Therapy
- 10:00 - 10:30 3. Dr. Stickley
Assessment of MRR Performance
- 10:30 - 10:45 COFFEE
- 10:45 - 11:15 4. Dr. Cotzias
Activation Analysis
- 11:15 - 11:45 5. Dr. Robertson
Non-inertial Scanner under Development
- 11:45 - 12:15 Visit to MRR
- 12:15 - 1:30 LUNCH
- 1:30 - 2:00 1. Dr. Jansen
Biological Evaluation of Accelerator Beam
Uniformity
- 2:00 - 2:30 2. Dr. Bateman
RBE of Accelerator Neutrons
- 2:30 - 3:00 3. Dr. Lippincott
Whole Body Counter Turnover Measurement of Protein
- 3:00 - 3:30 4. Dr. Cohn
Strontium and Calcium Studies in Whole Body Counter
- 3:00 - 3:45 TEA
- 3:45 - 4:15 5. Dr. Stoner
Gamma Ray Repression of Immunity
- 4:15 - 5:00 Visit to Analog Computer and the Whole Body Counter
- 5:00 - 5:30 Visit to Accelerator
- 6:00 COCKTAILS
- 7:00 DINNER

VISITING COMMITTEE (cont'd)

Tuesday

- 9:00 - 9:30 1. Dr. Price
Iron Absorption in Hemotologic Disease
- 9:30 - 10:00 2. Dr. Shreeve
Respiratory Exchange and Isotope Study
- 10:00 - 10:30 3. Dr. W. Hughes
Brookhaven Devices and Medical Department
Biochemistry
- 10:30 - 10:45 COFFEE
- 10:45 - 11:15 4. Dr. Hankes
Tryptophane Metabolism Studies with Carbon 14
- 11:15 - 11:45 5. Dr. Dahl
Isotopic Values in Na Metabolism
- 12:00 - 1:00 LUNCH
- 1:00 - 1:45 Administrative Report by Dr. Farr
- 1:45 - 3:30 Executive Session
- 3:30 - 3:45 COFFEE
- 3:45 - 4:00 Departure