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METABOLIC UNIT
MASTER FILE
BOOK I

713306

October 18, 1949

DR. JOHN H. LAWRENCE

(TOBIAS)

Dear John:

Regarding the proposed use of the metabolic unit to be possibly set up at Cowell Memorial Hospital, I believe my group could profit a good deal having access to this unit, especially in regard to our studies on rheumatoid arthritis and cancer. Immediate studies could be undertaken on patients with arthritis and on normal controls concerning:

(1) Skin temperature and peripheral circulation studies using the radioactive sodium technique and our skin thermometer. Study of various agents which influence the circulation.

(2) Distribution of radioactive Au and Ag, which are used as therapeutic agents in this disease and the mechanism of transport of these elements in the plasma and white cells.

(3) On the liver and blood protein changes in jaundice. Rheumatoid arthritis patients with jaundice are known to recover from their arthritis and we should like to find the reason for this.

(4) On the abnormalities of the Ca metabolism in arthritis.

The Cancer work: We could use some material from patients in metabolic unit for trace analysis by induced radioactivity to find out if there is any abnormality in the normal metabolism of such patients. In addition one might mention the possibility that seems rather remote at the moment! The possible future experimental therapy of cancer patients using the beam of the big cyclotron.

General physiology: Some experiments should be done concerning the narcotic effect of certain gases, such as xenon, and possibly krypton. In order to explain the narcotic effect, we have postulated a theory,

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some aspects of which would be tested by making new observations on the rate of uptake and desaturation of these inert gases.

Another worthwhile problem to follow up was the finding by our group several years ago concerning the absorption of radioactive inert gases from the duodenum, stomach and intestines. It would be highly desirable to continue such studies and expand them on normal and diseased people, and carry them over to substances other than inert gases in an effort to understand the excretory functions of the intestinal membranes better than has been possible so far.

The above outlined problems are all part of long range plans of my group. Obviously they could not be done in the past six months, but most of these could be started almost immediately, and the work would probably last for several years before the projects could be considered completed.

Sincerely yours,

Cornelius A. Tobias

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