

File

CMLRD-CW-M(P4)

TRIP REPORT - WESTERN RESERVE UNIVERSITY,
14 NOVEMBER 1958ACTG CH, PHARMACOL BR
CH, PHYSIOL DIV
DEP DIR FOR SCIEN. ACT.
DIRECTOR
IN TURN✓ EDMUND BAY
CONTRACT PROJ OFF25 Nov 58
DR BAY/AMS/25249

1. SUBJECT: VISIT TO DEPARTMENT OF DERMATOLOGY, WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE.

2. PURPOSE: TO DISCUSS WITH THE INVESTIGATORS WORK UNDER CONTRACT DA18-108-405-CML-215.

3. PLACE AND DATE: CLEVELAND, OHIO, 14 NOVEMBER 1958.

4. AGENCIES REPRESENTED:

A. DIRECTORATE OF MEDICAL RESEARCH, USACWL

EDMUND BAY, PHYSIOLOGY DIVISION

B. WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE

RICHARD B. STOUGHTON, DEPT. OF DERMATOLOGY
WILLIAM E. CLENDENNING,

5. SUMMARY OF DISCUSSION:

A. DR. R. B. STOUGHTON IS ORGANIZING A STUDY TO DETERMINE WHAT PHYSICAL PROPERTIES OF A COMPOUND ARE ASSOCIATED WITH ITS ABILITY OR LACK OF ABILITY TO PENETRATE HUMAN SKIN. IT IS PROPOSED TO TAKE 20 TO 40 ORGANIC AND INORGANIC COMPOUNDS LABELED WITH C14, S35, OR P32 AND DETERMINE THEIR PERCUTANEOUS ABSORPTION BY MEANS OF SURFACE COUNTING WITH A SPECIALLY DESIGNED GAS FLOW COUNTER WHICH CAN BE APPLIED DIRECTLY TO THE SKIN. INITIAL COUNTS COMPARED TO COUNTS OBTAINED AT REGULAR INTERVALS WILL GIVE A GOOD MEASUREMENT OF THE AMOUNT OF THE COMPOUND WHICH HAS PENETRATED THE HUMAN SKIN. THE RATE OF ABSORPTION OF THESE COMPOUNDS WILL BE EXAMINED IN REGARD TO THEIR PHYSICAL PROPERTIES (POLARITY, MOLECULAR SIZE, DIFFERENTIAL SOLUBILITIES, ETC.) WITH THE HOPE THAT SPECIFIC PHYSICAL PROPERTIES WILL CORRELATE WITH ITS RATE OF PENETRATION. SUCH INFORMATION WILL BE OF HELP IN PREDICTING WHICH COMPOUNDS WILL PENETRATE THE SKIN AND AT WHAT RATE. ALSO COMPOUNDS CAN BE DESIGNED TO MEET PHYSICAL PROPERTIES WHICH WILL ALLOW THEM TO PENETRATE HUMAN SKIN. AFTER THIS INITIAL PHASE, DR. STOUGHTON HAS INTENTION TO MEASURE THE EFFECTS OF ENVIRONMENT (HEAT, COLD, HUMIDITY, ETC.), REGIONAL VARIATION, SKIN DISEASE AND KERATOLYTIC AGENTS ON PERCUTANEOUS ABSORPTION.

*2.5.2/14
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IN RELATION TO THE WHOLE PROBLEM, HE WILL DO HISTOCHEMICAL INVESTIGATIONS WITH SPECIFIC REFERENCE TO THE BARRIER AREA IN HUMAN SKIN.

B. DR. STOUGHTON IS AT THE PRESENT TIME SATISFACTORILY EQUIPPED WITH INSTRUMENTS NECESSARY FOR HIS PROJECT.

E. B.

EDMUND BAY
PHYSIOLOGY DIVISION

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