

NOTICE OF RESEARCH PROJECT

BIO - SCIENCES INFORMATION EXCHANGE
SMITHSONIAN INSTITUTION

NOT FOR PUBLICATION OR
PUBLICATION REFERENCE

PROJECT NO. (Do not use this space)

GAC-28643 C3

AF 33(038) 28643

7756-9

SUPPORTING AGENCY: **Dept. of the Air Force, School of Aviation Medicine**

TITLE OF PROJECT: **Diseases of the
Study of/~~External Otitis~~ Ear**

RCC3.960607.001

Give names, departments, and official titles of PRINCIPAL INVESTIGATORS and ALL OTHER PROFESSIONAL PERSONNEL engaged on the project.

**Ben H. Senturia, M.D., Project Director, Assoc.Prof. of Clinical
Otolaryngology**
F.M. Liebmann, M.D., Pathologist
M.D. Marcus, M.D., Consultant in Dermatology
S.P. Chiang, Ph.D., Chemist
O.H. Lowry, M.D., Professor of Pharmacology

NAME AND ADDRESS OF INSTITUTION:

Washington University, St. Louis, Missouri

SUMMARY OF PROPOSED WORK— (200 words or less — Omit Confidential data.)

In the Bio - Sciences Information Exchange summaries of work in progress are exchanged with government and private agencies supporting research in the bio - sciences and are forwarded to investigators who request such information. Your summary is to be used for these purposes.

Chemistry:

Development of Micro-techniques
Analysis of Secretions in Health
Study of Chemical Changes Occurring in Skin Secretions
Lipid & Protein Content of Normal Cerumen as Affected by Age & Sex
Development of Prophylactic Ear Ointment

Histology & Pathology:

Description of Pathological Changes in Various Forms of External (Otitis)
Study of Physiology & Pathology of Epidermal Glands
Evaluation of Environmental Factors Contributing to External Otitis
Search for Satisfactory Experimental Animal
Production of Disease in Animals
Investigation of Nervous Control of Epidermal Glands of Ear.

Bacteriology:

Correlation of Bacterial Flora & Type of External Otitis.
Significance of Fungi & Bacteria in Post-operative Cavities

Clinical Application:

Evaluation of Various Therapeutic Preparations & Techniques.
Place of Steroids in Therapy.
Use of Prophylactic Ear Ointment.
Relative Value of Partial & Full Thickness Skin Grafts.

SIGNATURE OF
PRINCIPAL
INVESTIGATOR

Ben Senturia MD

Identify the Professional School (medical, dental, public health, graduate, or other) with which this project should be identified:

SCHOOL **Medical**

Submitted 3/55

INVESTIGATOR—DO NOT USE THIS SPACE

Grant No.	Period of Operation	Amt. App.
GAC-28643	5/51 - 4/52	\$30,812
28643 C1	5/52 - 4/53	30,812
28643 C2	5/53 - 7/54	33,952
28643 C3	8/54 - 10/15/55	22,884

RESEARCH PLAN

Observations will be made upon the pathological and clinical changes occurring in the middle ear, mastoid, and external ear canal for a better understanding of etiology and treatment of external otitis. One of the complications of external otitis is the cholesteatoma in nature resulting from cyst formation of the external ear canal.

Diagnosis, differential by physical measurements and functional tests, and results of various types of treatment will be determined in a group of both normal and experimental human volunteers.

Observation of patients with inflammatory diseases of the external ear will be made at Washington University, St. Louis, source of pathologic material, and Washington St. Louis Children's Hospital, source of pathological material, and Washington University Ear, Nose, and Throat Clinics, source of patients for therapeutic trials.

Experimental production of external otitis in human volunteers will be performed, and special therapeutic measures will be taken to correct skin changes.

Informal progress reports at the end of three, nine, fifteen, twenty-one, twenty-seven, and thirty-three months; formal progress reports at the end of six, twelve, eighteen, twenty-four, and thirty months, and a final research report at the end of thirty-six months will be submitted in triplicate to the Secretariat, USAF School of Aviation Medicine, Randolph Field, Texas.