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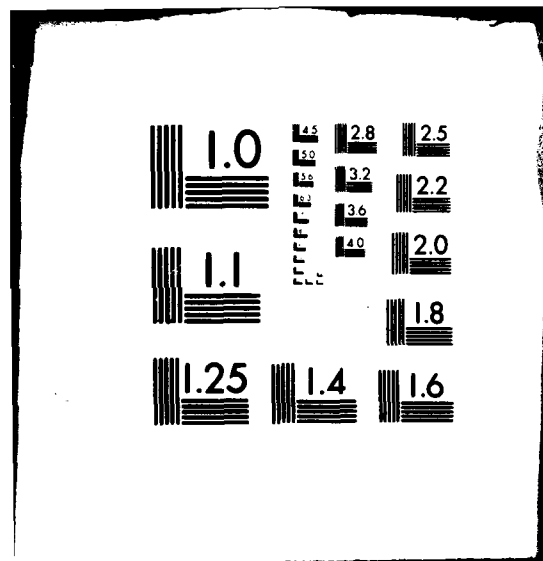
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RESEARCH REPORT ON THE EFFECTS OF...

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army Position unless so designated by other authorized documents.

In conducting the research described in this report, utilizing animals, the investigators adhered to the Guide for the Care and Use of Laboratory Animals, as promulgated by the Committee on Revision of the Guide for Laboratory Animal Facilities and Care of the Institute of Laboratory Animal Resources, National Academy of Sciences - National Research Council.

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U.S. ARMY RESEARCH AND DEVELOPMENT

TECHNICAL REPORT

RCS-MEDDH-288 (RI)

ARMED FORCES INSTITUTE OF PATHOLOGY

Washington, D.C. 20306

ANNUAL PROGRESS REPORT

1 OCTOBER 1978 - 30 SEPTEMBER 1979

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00	LJ664713D147	Lesions in Animals Fed Enzyme Inactivated Frozen and Irradiated Meats H.W. Casey, Col, USAF, VC M.A. Stedham, LTC, VC, USA R.C. Trucksa, MAJ, VC, USA	1

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				NAME: Trucksa, R. C., MAJ, VC, USA				
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23. (U) To determine the wholesomeness for human consumption of radiation sterilized meat by studying the pathologic effects, if any, of feeding dogs, rats and mice irradiated meat. Preservation of food is vital to military operations.								
24. (U) The U.S. Army is conducting contractual studies on the wholesomeness for human consumption of radiation sterilized meat. Pathological results obtained from experimental animals will be statistically analyzed and submitted together with other experimental data to the FDA and USDA to establish a regulation permitting unlimited consumption of radiation sterilized meat. The AFIP serves as monitor and reviewer of the pathologic findings in the contractor's experimental and control animals.								
25. (U) 7810-7909. AFIP pathologists performed five site visits to the contractor's laboratories, Raltech Services Inc., during the year, to review the procedures and results of the pathology portions of the project. Complete sets of specimens from 198 animal cases consisting of 1783 paraffin blocks were selected by AFIP pathologists for detailed histologic study for quality control studies. These cases have been accessioned into the Registry of Veterinary Pathology for permanent accessibility. During the course of the year the contractor's pathology effort has improved. In early portions of the project pathology lagged far behind and a significant number of tissue specimens, i.e. pituitary, thyroid and parathyroid, were not available for histopathologic examination. This problem has markedly improved as has descriptive coding of lesions. The contractor's pathology effort was judged at an acceptable professional level at the end of the current reporting period.								

ANNUAL PROGRESS REPORT

TITLE PAGE

Project No. LJ664713D147

Title: Lesions in Animals Fed
Enzyme Inactivated Frozen
and Irradiated Meats

Task No. 00

Name and Address of Reporting Installation:

Armed Forces Institute of Pathology
Washington, D. C. 20306

Name of Department: Veterinary Pathology

Period Covered by Report: 1 October 1978 - 30 September 1979

Professional Authors: H. W. Casey, Colonel, USAF, VC
M. A. Stedham, LTC, VC, USA
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BODY OF REPORT

Project No. LJ664713DL47

Title: Lesions in Animals Fed Enzyme
Inactivated Frozen and
Irradiated Meats

Task No. 00

The AFIP continued as the monitor and reviewer for the U. S. Army of pathology findings in experimental and control animals on the longterm wholesomeness testing of irradiated meats. AFIP pathologists performed five site visits to the contractor's laboratories between 1 Oct 78 and 30 Sept 79. Also one visit to the AFIP was made by the Raltech senior pathologist. Specimens from 198 animal cases consisting of 1783 paraffin blocks were received at the AFIP and accessioned in the Registry of Veterinary Pathology.

AFIP pathologists have worked closely with the contractor's pathologist in the standardization of coding all lesions. Efforts in this area included clearly defining minor and major differences and providing consultation prior to Raltech's formal report on neoplasms which are not distinct. Selection of cases to be studied histopathologically is accomplished by a detailed review of the contractor's pathology reports on each individual animal. This permits an appraisal of all the contractor's diagnoses and the histological review of the case with diagnoses of an unusual nature, in addition to a review of the contractor's interpretation of the lesions normally expected in laboratory animals.

To improve the quality of the histologic preparation of the eye specimens, special training at the AFIP was arranged for, so that the Raltech technician could receive training by the AFIP, ophthalmic histological processing division laboratory.

A method of strict accounting of the paraffin blocks has been instituted. The number of blocks for each case forwarded to the AFIP is recorded by Raltech on an AFIP form. This number is then checked by the number of blocks received by the AFIP and finally the number of slides processed.

The data acquired through reviewing the Raltech cases is now compiled and arranged in an easily readable report which is uniform in format. This permits direct comparison of AFIP results with that reported by Raltech pathologists.

All quarterly reports have been reviewed by the AFIP, pertaining to the pathology data recorded therein and observations have been provided to the project officer. Liaison has been made with the project officer to insure that the coding and formal data input into the AFIP computer will provide necessary retrieval data in the future, that will permit direct comparison with the contractor's data.

Title: Lesions in Animals Fed Enzyme Inactivated Frozen and Irradiated Meats

Results of the pathology review have shown that Raltech Scientific Services, Inc. diagnoses and characterization of lesions has improved markedly. A moderate number missing specimens from a variety of organs was noted and in some instances specimens from some small organ, i.e., parathyroid, pituitary, thyroid were routinely not present. Although the frequency of missing specimens has diminished greatly, this still represents the most significant area of concern in the study. Likewise, although in the past Raltech may have been tardy in processing the cases and in providing the AFIP with copies of their diagnoses, recently this appears to have been remedied. Over all, Raltech Scientific Services, Inc. diagnostic services were at an acceptable professional level.

At present the AFIP has reviewed all of the mouse study cases up to and including the 15-month sacrifice group. Some 26-month canine sacrifice cases, Flb generation termination cases as well as mouse moribund and spontaneous death cases are now being reviewed by the AFIP.

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