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J. Hett and H. Maak

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BENZENE AND THE GONADS

In experiments dealing with the problem of leukocyte degradation, I was able to make some interesting findings regarding the effect of benzene on the gonads. The mice used in the experiments received the bezene either subcutaneously with olive oil or via inhalation. The gonads exhibited changes in both series of experiments. Although there were no siginificant variations noted in body weight or general well being, a degeneration of the germinal epithelium vas observed in the testicles, first in the area of the spermatids and their transmutation forms to spermatozoa. The changes can then also extend into the area of the meiosis zone. Large lacunae frequently occur in the germinal epithelium. These can lead to the dissolving of the epithelial bond. In addition to the spermatozoa, the epididymis of the animals affected by the benzene also contains large quantities of immature dements.

The ovary reacts to the benzene with a significantly increased atresia, primarily of the larger follicle. The retrogression begins with an increased decomposition of the granulosis. The egg itself indicated pathological division symptoms. Multi-nuclear-eggs occur; in addition, a division of the cells themselves is observed. This should probably be interpreted in the sense of a parthenogenesis. The conconcrated occurrence of maturation spindles and crystalloid formations in the protoplasm of tie damaged eggs vas also obvious. Sterility could not be temporarily produced in either sex by means of the benzene. A female even gave birth to several young during the benzene treatment. However, these young later died.

The extent to which the reported finding (with respect to which individual, more comprehensive reports will be made at a later date) can also

be applied to larger animals and man must be demonstrated by subsequent findings. There is no doubt that the doses applied are relatively large. On the other hand, however, with a substance which penetrates the tissue so easily (as is the case with the lipid-soluble benzene) it can easily be imagined that smaller doses would also be able to cause alterations. Experiments directed toward this question and involving weak doses should decide whether effects on the gonads can likewise be found. It is no only the behavior of the directly influenced animals which must be considered, but also the viability of their offspring. (From the histological department of the *Anatomy* Institute of the University of Erlangen, Director: Prof. J. Hett).

QUALIFICATIONS OF TRANSLATOR, EDITOR AND REVIEWER OF THIS JOB.

This job was translated in rougn form by Ms. Pamela *Gregg*, a member of the translation staff at Literature Research Company. Ms. Gregg has an M. A. degree in German and teaches the language at Northern Virginia Community College. Her undergraduate work was in languages, chemistry and biology. Ms. Greqg has more than 5 pears of experience as a translator. During this period she has completed more than 500 articles in the fields of occupational health and environmental safety with heavy emphasis on ——ecological and dermatological cffects of noxious agents.

This fob vas edited by Mr. Robert F. Kursch, chief of the editorial staff at LRC. Mr. Kursch has more than ten years of experience as an editor of medical literature, both in the original English and German languages, as well as in translated form. Careful attention was paid *to* grammar and syntax, as well as accuracy of the medical, chemical and biological terminology used.

This job vas reviewed by Richard L. Bullington, Jr. owner of LRC. Mr. Bullington has more than 25 pears of experience as a translator of German and Russian in the biomedical field. He has personally translated more than 5,000 articles dealing vith the biomedical effects of noxious agents and has reviewed countless articles on this subject.

Literature Research Company is the largest translator of occupational and environmental safety and health material in the United States, holding present contracts vith EPA, NIOSH *(6* years), OSHA (3 pears), Stanford Research Institute, JRB Associates and Equitable Environmental Health (the last three being prime NIOSH contractors for the production of Criteria Documents on noxious agents and processes). LRC does most of the translations required by NIH, FDA ana all the wrk required by Walter Reed Army Institute of Research (10 years service to all three institutions). It also translates similar material for more than 20 of the largest pharmaceutical companies in the world and such other firms as DuPont (4 different laboratories, including central R & D), Diamond-Shamrock, EXXON, Goodyear, Goodrich, Allied Chemical, Celanese, Tennessee Eastman Co., Corning Glass, Owens-Corning Fiberglas, etc.

LRC translated more than *400* articles on the noxious effects of benzene for Stanford Research Institute during the determination of the proposed standard and TLC values for NIOSH during 1976 and 1977.