News of Science

More Mutation in Males?

In connection with the report of Glass and Ritterhoff [*Science* **124**, 314 (17 Aug. 1956)] that mutations with visible effects in *Drosophila* are at least 10 times as frequent in the male germ line as in the female germ line, for the loci studied, it is significant that J. B. S. Haldane has on more than one occasion conjectured that the same relation might be true in the human species. In the *Annals of Human Genetics* (May 1956) he makes estimates of the mutation rate to the sex-linked recessive gene responsible for muscular dystrophy (of the Duchenne type). Although the data are scanty, the result of the estimate is that the mutation rate in the female parent can scarcely be higher, and more probably is considerably lower (1/6), than the rate in the male parent.

Similar and more extensive data for hemophilia led Haldane in 1947 to suggest that the same might be true for that harmful trait, but the accuracy of diagnosing women heterozygous for the trait, a necessary parameter of the calculation, has been called in question. At least there are these two cases with a suggestive similarity to the *Drosophila* data. Haldane emphasizes that "as the importance of mutation for the causation of disease is recognized, and the possibility of increase in human mutation rates as a result of atomic nuclear reactions is discussed, it becomes of interest to compare mutation rates in the human sexes."—B. G.

AEC-World Bank Agreement on Aid for Nuclear Power Plants Abroad

The U.S. Atomic Energy Commission and the Export-Import Bank of Washington, D.C., have agreed upon joint action to assist with the construction of atomic power plants in nations that enter into Agreements for Cooperation with the United States. The Export-Import Bank is prepared to consider loans to privately owned public-utility companies, as well as to governments, to finance the construction of atomic power plants abroad. The terms would be similar to those provided in its financing of conventional types of power plants where U.S. equipment and technical services are required. These developments will take place under the following general conditions.

1) Nations seeking financial as well as engineering assistance in construction of atomic power plants must have completed an Agreement for Cooperation with the United States, as provided in the Atomic Energy Act of 1954.

2) The Export-Import Bank will require (i) a comprehensive engineering survey of a project; (ii) a technical report by the AEC on the reactor part of a project; (iii) an arrangement for availability of atomic fuels, through lease or sale by the AEC, for the term of a loan; (iv) evidence of over-all financial and economic soundness of a project; (v) evidence of the availability of funds to defray the local currency costs of the projects; (vi) assurances on the ability of the country concerned to service the dollar debt involved.

3) Proceeds of the loan can be spent only for equipment, materials, and technical services to be exported from the United States.

NSF Surveys Nonprofit Research Institutes and Commercial Laboratories

The scientific research and development effort of nonprofit research institutes and commercial laboratories in 1953 amounted to an estimated $85 million and required the employment of about 5000 scientists and engineers, according to a new National Science Foundation report, *Research and Development by Nonprofit Research Institutes and Commercial Laboratories, 1953*. The report was prepared by the Maxwell Research Center, Syracuse University, and is a part of an over-all survey of the entire research and development effort in this country. It covers all the known nonprofit research institutes and a substantial sample of all the commercial laboratories.

A majority of this country's commercial laboratories and nonprofit research institutes have been founded since 1941. This rapid increase can be accounted for largely by the swift expansion of the Federal Government's research programs, particularly those of the military departments.

There is little significant difference between the research and development programs of the two types of organizations. In general, both types have been established to provide scientific services to industry and are oriented towards solving specific practical problems.

During 1953 commercial laboratories spent approximately $35 million for scientific research, of which about $4 million was for basic research; nonprofit research institutes spent more than $50 million for research, which included approximately $3 million for basic research.

The Federal Government contracted with the commercial laboratories for about half of their total research expenditures and industry sponsored the remainder, except for a small portion of funds derived from such sources as trade associations, foundations, and universities. In the case of the nonprofit research institutes, the Government contracted for approximately twice the volume of research and development financed by industry.

A copy of the NSF report may be obtained for 50 cents from the Superintendent of Documents, Washington 25, D.C.

Radiation Death

Radiation exposure caused the death of Kenneth A. Koerber, Philadelphia physician who worked in the Atomic Energy Commission's Brookhaven National Laboratories between 1946 and 1948, according to the finding of a recent inquest. An autopsy at the time of death last July failed to disclose the cause, and a second autopsy was ordered.

In Washington, a spokesman for the AEC said: "We have nothing showing that [Koerber] ever got a dose of radiation. He did not work with radioactive materials and was not exposed to them in the course of his work."

Joseph W. Spelman, medical examiner for the city of Philadelphia, has made the following statement:

"We presume that Dr. Koerber somehow got a dose of atomic radiation that now, ten years later, caused his death. We have conclusively proved that he was subject to atomic radiation or to the inhalation or to the eating of atomic compounds. At the present time his bones contain 1000 times the maximum safe concentration of radiation."

Part of Koerber's duties at Brookhaven was inspecting laboratories to protect the workers from radiation. Spelman said the radiation absorbed by