

Inhibitory Effect of Isologous Irradiated Leukemic Extracts upon Spontaneous Leukemogenesis in AkR Mice¹

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SUMMARY

Newborn AkR mice were given injections of an irradiated cell-free extract of isologous leukemic tissues. Litter mate controls were either not treated or treated similarly with an irradiated extract of isologous normal tissues. The injection was repeated at weekly intervals during 2 months. The animals were then kept under observation and their leukemias recorded. In all, 1947 mice were used.

The extracts were irradiated with ultraviolet light or with X-rays; the latter were used to observe either the direct or indirect effect of radiation. The following facts have been observed: (a) If the dose of radiation is high enough to suppress the superinfection effect of the extract, but does not exceed a certain limit, the irradiated extract of leukemic tissues decreases the frequency of the spontaneous leukemias. Extracts of normal tissues are ineffective. (b) Out of 5 ultraviolet-irradiated extracts, 1 was inactive, whereas the 4 others decreased the incidence of leukemia by 12–28%. (c) X-rayed extracts (indirect effect) were more effective, decreasing the incidence by 30–42%. (d) The direct effect of X-rays yields inactive extracts. The difference between the 2 modes of action of X-rays confirms *in vivo* what had been observed *in vitro* with the Rous sarcoma virus.

These results suggest a prospective scheme for an anti-viral treatment, complementary to the classical treatment of certain cancers.

¹ A complete report of this work has appeared in *Annales de l'Institut Pasteur*, 107: 1–26, 1964.