amounts. The symptoms which developed some days after administration consisted of spastic paralysis and epileptiform seizures, terminating fatally.

The results of these experiments seem to indicate that the tetra-, penta-, and hexa-methyl pararosanilins are equally clonorchicidal, although theoretically, as well as by the bactericidal test, crystal violet, the pure hexa-methyl pararosanilin, should be the most potent member of the series. On the other hand the lower and higher homologs of the series, tri-methyl and hepta-methyl pararosanilins, are non-clonorchicidal, while the latter is definitely responsible for fatal disturbances of the central nervous system. The structural formulae of these dyes indicates that the compound is lethal for Clonorchis when there are no fewer than 4 and no more than 6 methyl groups. Apparently the potency is as great with 4 as with 5 or 6 such substitutions.

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Ineffectiveness of Radiant Energy on Hemorrhagic Anemia in Dogs.*

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Twenty white animals in which the Hb level had been reduced by 3 or 4 successive hemorrhages, at from 2 to 3 days intervals to between 35 and 50%, were fed the standard Whipple (salmon bread) diet and irradiated with the flaming C ("Pan Ray") arc. The interval between successive exposures, as well as their number and intensity, was varied in different experiments and in successive periods of the same experiment. The efficacy of the experimental procedure in effecting regeneration was measured by the amount of Hb which had to be removed during the experimental period, as compared with that removed during earlier and later control periods, in order to keep the Hb at the chosen reduced level.

Such irradiation produces a marked increase in the number of erythrocytes which progressively decrease in size but maintain a normal saturation, as was earlier reported for "normal" animals.

* Aided by a grant from the David Trautman Schwartz Research Fund of Tulane University.

The eventual decrease in red cell number during the later part of the post-irradiation period is accompanied by a reciprocal increase in the size. A pronounced increase in the percentage of reticulocytes usually precedes that of the total red count. In 5 experiments the reticulocyte percentage is double, or more than double, that preceding irradiation. Massive exposures (75 to 133 g. cal. per sq. cm.) given at long intervals are usually more effective than are smaller doses repeated more often.

An increase in Hb was noted in only one experiment. In 11 cases the amount of Hb formed during and immediately following the irradiation period was less than in previous or later control periods. In the remaining 8 cases there was no effect. It is to be emphasized that dried peaches, apricots, or lettuce added to the diet of animals which had shown no response to radiation produce their typical influence, although the accelerated Hb regeneration produced by adding these substances to the standard diet was not demonstrably influenced by any dosage of radiant energy. It is further of interest that the changes in reticulocytes and erythrocytes which characteristically follow flaming C arc irradiation of dogs on the standard bread diet are now absent. Irradiation of 6 dogs with the quartz Hg vapor arc (Cooper-Hewitt) gave similar results.

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Ineffectiveness of Radiant Energy on Anemia in White Rats.*

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Young rats placed on a milk diet (12% solution of Klim in distilled water) at about 21 days of age, grow about as well as rats do on the stock, Sherman B, diet and exhibit no evidences of avitaminosis. In 3 to 6 weeks the Hb falls to 4 or 5 gm. per cent, and the red cells to 4 or 5 million in contrast to the usual values at this age of 13 gm. per cent and 8 million. Control experiments indicate that a more severe anemia can be produced by fresh dairy milk. These anemic rats will not breed. Litters have been procured by transferring females to the stock diet and mating them with males that have always been on this diet. When the young are about 21

* Aided by a grant from the David Trautman Schwartz Research Fund of Tulane University