exactly the same way. It was found that when solutions treated with the alpha and beta radiations were examined within 24 to 48 hours, there was a slightly increased bactericidal activity shown after 5 minutes exposure to the disinfectant. This increased bactericidal property of the solution, however, disappears after a few days. The results obtained must be ascribed to the presence of actual alpha particles in the solution, which particles gradually disappear on standing. Very intensive irradiations were performed with gamma rays by exposing both solutions and crystals of Mercurochrome to 3500 millicuries from 1 to 10 hours. An examination of all these samples bacteriologically on cultures of *B. typhosus,* as described above, revealed no increase in the potency of the Mercurochrome, nor a decrease in the same.

Pharmacological studies of the irradiated samples were made on living seedlings of *Lupinus albus.* In this case, as in the bacteria, it was found that exposure to alpha particles produced a slightly increased toxicity of Mercurochrome. This, however, was not due to any change in the drug, but to the presence of the particles themselves, because the increased toxicity disappeared after a few days. Pharmacological tests on animals showed also no change in the potency of Mercurochrome after the various irradiations. The results of all the experiments lead to the conclusion that radium radiations do not affect the potency of Mercurochrome at all, and indicate that the compound is certainly very stable as far as these radiations are concerned. The effect of Ultra Violet rays has already been described by Macht and Hill elsewhere.[1] The authors are indebted to Dr. Fred West of the Howard A. Kelly Hospital for the irradiations experiments.

[1] Macht, D. I., and Hill, J. H., *J. Am. Pharm. Assn.*, 1927, xvi, 2.

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Adrenal Gland in Wild Gray and Albino Rat: Cortico-Medullary Relations.

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The wild gray rat *(Mus norvegicus)* has larger adrenal glands for a given body weight or body length than does the tame albino rat *(Mus norvegicus* var. *albinus).*[1] In both varieties the females

have larger adrenals than the males of equal size. In both sexes the adrenal glands of the adult gray rats weigh roughly twice as much as those of the albino rats. The work here reported was done to determine whether or not the proportion of the adrenal gland formed by the medullary (chromaffin) tissue was the same in both varieties or whether the larger glands of the gray rat consisted more largely of cortical cells.

The data for the albino rats were based on 27 female and 3 male adults. The material for the wild gray rats consisted of 9 females and 4 males caught near the laboratory and killed within 48 hours of capture. The glands were removed immediately after death, fixed, sectioned, stained, and the proportion of the glands formed by each part determined by measuring sections at every 100 micra.[2, 3] The results are shown in Table I.

TABLE I.

Percentage of the entire gland formed by the medulla.

Sex	Average Bd. W.	Wild gray medulla	Average Bd. W.	Albino medulla
Females	265 gm.	4.4%	167 gm.	6.2%
Males	229 gm.	5.9%	203 gm.	8.3%

Table II is the comparison between 4 hypothetical animals of the same body weight to show the number of mg. of cortical and medullary tissue that would be found, according to Table I, in their adrenal glands. The data for the weight of the adrenal gland compared to body weight are taken from "The Rat",[4] tables 148 and 206.

TABLE II.

Animal	Bd. Wt. gm.	Total wt. of adrenal mg.	Wt. of cortex mg.	Wt. of medulla mg.	% formed by medulla
Albino ♀	188	50.0	47.1	3.1	6.2
Albino ♂	188	33.1	30.3	2.8	8.3
Gray ♀	188	97.0	92.7	4.3	4.4
Gray ♂	188	80.0	75.3	4.7	5.9

This comparison indicates that in the adrenal glands of gray rats and albino rats of the same body weight (1) the proportion of medullary tissue to cortical tissue is less in the wild gray than the albino, (2) the absolute amount of chromaffin tissue is greater in the wild gray, and (3) most of the greater mass of the adrenals in the wild gray consists of cortical material.

[1] Hatai, S., *Anat. Rec.*, 1914, viii, 511.

[2] Jackson, C. M., *Am. J. Anat.*, 1919, xxv, 221-289.

[3] Donaldson, J. C., *Am. J. Anat.*, 1919, xxv, 291.

[4] Donaldson, H. H., "The Rat" (Philadelphia) 1924.