one part of proximal convoluted and straight tubules has been indicated absence of glutaminase activity. In normal rat kidney, moderate glutaminase activity activated by bicarbonate in the proximal convoluted and straight tubules was present. There was the absence of the activity in the proximal convoluted tubules of injured kidney. The collecting ducts and ascending and descending thin limbs showed no reaction. Distal convoluted tubules in acidotic rats showed the high activities of the both glutaminases. Moreover, the data of other enzyme activities are summarized in Table 1.

Of particular interest were the high activities of both glutaminases and glutamic dehydrogenase observed in rats in the straight convoluted and distal tubules and the strong activities of glutamic oxalacetic transaminase and carbonic anhydrase in the proximal convoluted tubules.

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Leuco-Malachite Green Staining for Ceroid

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For differentiating histochemically ceroid from lipofuscins, acid fast fuchsin stain, Schmorl reaction or chrome alum hematoxylin stain have been most often employed in paraffin sections, but these methods have been found unsatisfactory. A 0.05% Nile blue stain (pH 3.0) is more useful to differentiate both pigments; nevertheless, this method may be not said to be quite satisfactory. The present staining method is an outcome of further investigation of twenty-four leuco-dyes containing the triphenylmethane (15), oxazine (2), thiazine (3), azine (2), xanthine (1), and quinone imine (1) groups.

The procedure is as follows:

1. Formalin fixation is preferable.
2. Cut the paraffin block section.
3. Immerse for 18-24 hours at the room temperature in the following reagent.
Dissolve 150 mg. leuco-malachite green (Grübler Co.) in 14 cc. heated absolute ethyl alcohol, add 20 cc. distilled water, 6 cc. glacial acetic acid and 8 cc. of 0.8% KIO₄ in 0.3% HNO₃.

4. Wash in water repeatedly.
5. Counterstain in 1% aqueous eosin for several seconds.
6. Rinse briefly in water.
7. Remove excess water gently with the use of filter paper.
8. Dehydrate in alcohol quickly taking less than two minutes, then clear in xylene, and mount in balsam.

Results : Ceroid presents an emerald green color. Mast cell granules are also stained ; lipofuscins and hemosiderin unstained in the natural brown.

Note : In preparing the staining solution (3), first, malachite green should be dissolved in heated alcohol, secondly, its solution presents cloudiness when distilled water is added but with an addition of glacial acetic acid it turns clear. The solution of KIO_4 is routinely added. This solution should be freshly made each time.

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Explanation of a figure

Photomicrograph of liver section of an adult Wistar rat fed by a vitamin E-defficient diet for 294 days. Leuco-malachite green staining. Darkest granules shown by arrows indicating accumulation of ceroid. $\times 400$.