epithelial necrosis, calcification in the kidneys, and fatty deposits in the heart, liver and kidneys.

Summary: The minimal lethal dose of commercially available acetarsone administered orally to cats and rabbits is between 125 and 175 mgm. per kg. This is about 4 times the toxicity originally reported by Levaditi for the material prepared by Fourneau. In view of the relatively large number of clinical cases of acetarsone poisoning these experimental findings indicate the necessity of a revision of the recommended therapeutic dose.

The minimal lethal dose of the calcium and sodium salts of acetarsone on oral administration to cats and rabbits seems to be about the same as that of acetarsone.

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Osseous Changes Due to Pressure Trauma.

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When a continuous pressure is maintained upon the bone in the alveolar process of the maxilla the resulting trauma is characterized by several histo-pathological changes.

The manner of applying pressure is by means of bands cemented upon the crowns of the teeth. To these spring wire has been previously soldered so that when the appliance is in place the tension may be increased, decreased or changed in direction merely by bending the spring wire. Such appliances have been in place on teeth of monkeys *(Macacus rhesus)* from one day to 8 months and the results have been so striking that this preliminary report seems appropriate.

When the crowns of teeth are separated distally their roots are forced nearer each other. This pressure produces areas of absorption in the alveolar process as well as on the periphery of the roots. Combined with this absorption is a great amount of fibroblastic activity. These changes commence apparently early in the experiment as shown by the examination of the tissues from an animal on which the appliances had been in place only 24 hours.

In one case, where the greatest possible tension was applied in the effort to produce absorption, the alveolar process between the teeth was fractured.

The force used in producing this result as measured by Jolly balances was found to be one and three-quarters (1¾) pounds.

Approximating teeth were subjected to elongation tension and its opposite a depression tension. This double pull stretched the supporting tissues to a great degree and the effect was one in which the bone at the alveolar crest, the overlying connective tissue and mucosa have been pulled or dragged out of their proper position and have followed the movement of the attached tooth.

At the apex of the tooth the space between it and the bone is filled normally with a few layers of peridental membrane. The tooth which was pulled gradually from its socket showed a different picture. In this case the amount of peridental membrane had increased to 5 or 6 times its usual thickness.

The apex of the tooth which was being forced through the end of the socket was deeply eroded.

The fibres of the dentin matrix also show changes. They do not branch in the usual manner near the junction of dentin and cementum; they are smaller in number and in size and appear to be attenuated at the ends. The condition resembles somewhat the appearance of the fibres under an area of caries in which secondary dentin is being deposited.

When comparison is made between the processes concerned with the radicular resorption of deciduous teeth, it is at once apparent that differences are clearly manifest. There are even more striking dissimilarities demonstrable when bone absorption resulting from apical infection is studied.

In this case a low grade chronic infection may develop into an acute abscess. But in neither case has it been found possible to increase experimentally the rate of bone or tooth absorption.

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Studies on the Combination of Iron With Certain Proteins, Amino Acids and Related Compounds.*

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The present work is a continuation of the studies which have been carried out in this laboratory on the mode of combination of

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