in hypophysis-free albinos present a greatly expanded condition and that this expanded condition is not amenable to most experimental influences (temperature and light) although anesthetics affect it. An exactly opposite physiological state of these cells, *i. e.*, a contracted condition, usually occurs in the normal larvæ. *Successful skin exchanges altered the state of the xantholeucophores to correspond to that characterizing the new host.* The change is usually observable within fifteen minutes and is invariably complete within four hours. Inasmuch as the change is much more pronounced than that exhibited by animals of weakened vitality or immediately after death, it can hardly be referable to merely a transient condition of weakened vitality. More especially is this the case, since the changes taking place terminate only when the state of the transplanted xantholeucophores fully corresponds to that characterizing the new host.

The rapidity with which these changes take place would appear to establish the fact that the expanded physiological state of these cells in albinos is produced by the direct action of a hormonal substance and not by influences mediated through the nervous system inasmuch as nervous connections are completely severed, and it would be difficult to conceive of their reëstablishment by the time these changes are manifested.

46 (1421)

On the effects of ablation of the epithelial hypophysis on the other endocrine glands.

By **P. E. SMITH** (by invitation).

[*From the Anatomical Laboratory, University of California.*]

When the epithelial hypophysis is ablated in early embryonic stages in the frog, the resulting larvæ suffer in a characterisic way from defects in their pigment system. An equally definite set of alterations is produced in the other glands of internal secretion. Both Allen and the writer have reported the underdevelopment of the thyroid gland to which may in turn be attributed the failure of metamorphosis in these larvæ. The posterior lobe of the hypo-

physis in these larvæ is always present, though greatly underdeveloped—ample proof apparently of the need of coassociation with the epithelial portion of the gland. Most emphatic is the effect produced on the adrenal, whose cortical or interrenal substance is greatly decreased. This discovery was greatly facilitated by the employment of those methods which fix and stain the lipoids of the cortical tissue. These changes in the adrenal tissue do not occur in thyroidectomized larvæ and are consequently not to be referred to the thyroid reduction which is coincident with them.

47 (1422)

On the occurrence of degenerative changes in the liver in animals intoxicated by mercuric chloride and by uranium nitrate.[1]

By WILLIAM DEB. MACNIDER.

[*From the Laboratory of Pharmacology University of North Carolina, Chapel Hill.*]

The following observations are based on the study of fifty-two intoxications by mercuric chloride and eighty-four intoxications by uranium nitrate. Dogs were employed for the experiments. In the animals intoxicated by mercuric chloride, the poison was administered by stomach tube in the dose of 15 mgs. per kilogram. In the uranium intoxications, the poison was given subcutaneously in doses varying from 4 to 6.4 mgs. per kilogram.

The experiments were terminated at different periods during the intoxication without employing an anesthetic. Such a termination has eliminated the acute degenerative changes in the liver which may develop very rapidly from the use of such an agent. The changes in the liver in both types of intoxications have shown great variation in their severity and the rapidity with which they occur.

MERCURIC CHLORIDE INTOXICATIONS

All of the animals in this group, with eight exceptions, developed a severe gastroenteritis. The stools were frequent and

[1] Aided by a grant from The Rockefeller Institute for Medical Research.