

Spleen infusion had no effect on volume of the gland. The same may be said for orchitic extract.

Parathyroid infusion decreases blood-pressure for a short time, also decreases pancreatic volume for a short period, and then greatly increases it.

Infusion of corpus luteum decreases blood-pressure momentarily and increases the volume of the pancreas.

Pineal infusion increases the flow of pancreatic juice.

60 (877)

The origin of the cardiac impulse in the turtle's heart.

(PRELIMINARY COMMUNICATION.)

By **W. J. MEEK** and **J. A. E. EYSTER.**

[*From the Physiological Laboratory of the University of Wisconsin.*]

Recent work has emphasized the sinoauricular node as the seat of origin of the cardiac impulse in the normal heart. This structure must be considered anatomically as forming a connection or junction between remains of the primitive sinus, which has disappeared as a separate chamber in the mammalia, and the auricle. Since indications of the presence of a sinoauricular junction, composed of tissue differentiated histologically from the ordinary cardiac muscle, is found not only in those hearts in which the sinus has disappeared as a separate chamber, but also in the amphibia and reptiles, where a separate sinus venosus is present, it becomes of essential importance to determine whether or not in these animals the heart beat arises as it does in the mammalian heart, that is in the sinoauricular junction. This problem may be attacked by determining that region which shows initial electric negativity when connected with the string galvanometer. We have had this problem in mind for some time, but have been unable to proceed with it because of the difficulty in securing material with sufficiently large hearts to test this point satisfactorily. Recently we have been able to secure one large turtle in which the heart was of sufficient size. In this the right half of the sinus was 35 millimeters long and 20 millimeters wide at its

junction with the left half. We compared the onset of negativity at the sinoauricular junction with the right and left halves of the sinus, and found the junction to precede in negativity. It must be borne in mind, however, that in the exposed heart, automaticity and conductivity may sometimes be abnormal, and a fairly long series of observations will be necessary in order to determine without question, the normal origin of the impulse. We have arranged for a supply of large turtles in order to continue the work, but shipment of these to northern points can be made only in late spring or summer. Since our work is thus temporarily delayed and since we feel the observation, if it can be confirmed by other experiments, is of fundamental importance, we have been led to make a report of this single experiment at the present time.

61 (878)

Further observations on the physiological properties of the lipins of the egg yolk.

By **E. V. McCOLLUM** and **MARGUERITE DAVIS** (*by invitation*).

[*From the Laboratory of Agricultural Chemistry of the University of Wisconsin.*]

We have continued our former studies¹ which have shown that rats which have grown as far as possible on a diet of casein, dextrin and inorganic salts, can make a new growth when small amounts of the ether extract of butter or of egg is added, while they are unable to do so when lard, olive oil, lecithin or cholesterin is added instead of the ether extracts mentioned. These have since been fully confirmed by Osborne and Mendel who have obtained similar results when unsalted butter² or purified butter fat³ was employed.

We have now observed that ether, or petroleum ether extract of *boiled eggs* possesses the same physiological property of inducing a new growth as does the extract previously described. The active principle, whose chemical nature is still unknown, is therefore resistant to heat, and is soluble in petroleum ether as well as

¹ *Journal of Biological Chemistry*, Vol. 15, p. 167 (1913).

² Osborne and Mendel, *Journal of Biological Chemistry*, Vol. 15, p. 311 (1913).

³ Osborne and Mendel, *Journal of Biological Chemistry*, Vol. 16, p. 423 (1913).