

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.

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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).

ether. Experiments now in progress seem to indicate that the acetone extract of egg yolk possesses in some degree at least the same power to induce new growth in rats whose growth has become suspended after long feeding with diets of purified food substances.

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The experimental production of hyaline casts by injections of magnesium salts.

By **F. L. GATES** (*by invitation*).

[From the Department of Physiology and Pharmacology of the Rockefeller Institute for Medical Research.]

In view of the urinary findings after magnesium-ether anesthesia in human cases, just reported to you by Dr. Peck, Dr. Meltzer suggested that we try to produce hyaline casts in animals by injections of magnesium salts.

We have used rabbits, monkeys, and dogs, but the results to be reported tonight relate only to experiments on dogs. Epsom salt in sublethal doses, with and without ether by insufflation, was given to dogs intramuscularly and intravenously. In all cases many hyaline casts appeared. They were most abundant from 3 to 6 hours after the injection and disappeared in 24 or at most 48 hours. No epithelial or granular casts were found and no measurable albuminuria occurred. Ether alone did not produce casts and ether and magnesium produced no more than magnesium alone. In one experiment, magnesium chloride gave the same results as the sulphate.

Our essential point is that hyaline casts in large numbers can be produced in dogs at will by injections of magnesium salts. Epithelial and granular casts and albuminuria are not present and the appearance of the hyaline casts is only temporary.