guinea-pig tissues, which is usually ascribed to the presence of the same antigen in sheep cells and guinea-pigs cells. Consequently the latter neutralize the injected hemolysins, instead of anchoring them in unchanged form. If, however, the serum of rabbits immunized against ox red blood cells is used, passive sensitization is invariably induced.

The mechanism differs somewhat from that of serum anaphylaxis. As in the latter, indeed, the essential factor is the cellular or anchored antibody. In addition, however, there must be sufficient circulating antibody to break up the alien cell (hemolysin), dissolve its protein, and so bring it into intimate contact with the anchored antibody. It is on this account that an animal must be actually partially immunized, so that its blood gives a hemolytic titer, in order to sensitize it. These two factors have been demonstrated by showing that passively sensitized guinea-pigs which have then been thoroughly perfused with normal guinea-pig blood, are no longer sensitive to washed alien red cells, but do succumb to the injection of sensitized cells. Actively sensitized animals react in the same fashion, if the experiments are done at a long interval after primary sensitization, when circulating hemolysin has disappeared. Finally, in all animals dying of red cell anaphylaxis the blood serum is tinged with hemoglobin. As regards controls, it may be said that the injection of sensitized cells, or the simultaneous injection of cells and hemolytic serum has no effect.

89 (1021)

The origin of endogenous uric acid.

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The source of the endogenous uric acid of the urine has been the cause of much speculation and experimentation for years. The theories that it arises from glandular or muscular activity, however, have claimed most attention.

Experiments have been conducted on man to determine the

effect of activity of the alimentary apparatus upon the excretion of endogenous uric acid. To this end a comparison was made of the hourly uric acid excretion during a fasting condition and that when the digestive glands had been stimulated in various ways. The succagogues employed were pure nutrients—protein, fat and carbohydrate and combinations of these—pilocarpine and alcohol. In addition the effect of the laxatives phenolphthalein, castor oil and Epsom salt was investigated. These may act either by increasing peristalsis or the secretion of water into the intestine, or both, according to the laxative employed and the amount. The action of atropine under conditions where a secretion of digestive juices would be expected—after the ingestion of food—was studied and an experiment was carried out to obtain some light on the rôle of muscular work in the excretion of uric acid.

The results of the investigation show that activity of the digestive glands, initiated by the foods mentioned or pilocarpine, is attended by an augmented excretion of uric acid. The laxatives showed no influence on the excretion of uric acid even when agar agar was taken previously for the purpose of increasing the mechanical work of the intestine. Neither did alcohol or muscular exercise. Atropine inhibited the rise which normally follows the ingestion of the food-stuffs taken subsequent to the atropine.

90 (1022)

The mechanism of the action of anti-pneumococcic serum.

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A year ago it was observed that an intravenous injection of a small amount (0.2 c.c.) of immune serum causes the disappearance, within ten minutes' time, of the bacteria from the blood of a rabbit having a pneumococcic septicæmia. It was decided to investigate the above phenomenon in the hope of ascertaining, if possible, the manner of action of anti-pneumococcic serum.

In the light of our results concerning the behavior of typhoid bacilli in the circulation of normal rabbits, we believed it possible