

From such tubes, containing a small amount of aleuronat in agar and filled up with Ringer's solution, leucocytes for phagocytic experiments may be collected daily over a long period. During the first day few leucocytes enter the tubes, but after 48 hours, and subsequently, a 15-20 c.c. specimen of ground glass opacity may be recovered from each tube. Practically all of these cells are polymorphonuclear leucocytes and about 80 per cent. of them are viable, as observed in a hanging drop in which the dead cells are stained with aqueous carmine or trypan blue. Of the living cells, 15 per cent. or less will die during the 24 hours after removal, indicating that 65-75 per cent. of the cells are in good condition, an observation which is confirmed by their phagocytic activity.

The introduction of bacteria into the tubes furnishes an opportunity for the observation of certain phases of the struggle between invader and host. In general, the method seems applicable to a variety of studies in chemotaxis and resistance to invasion.

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Experiences with thyroidectomy and ligation of the thyroid arterie in depancreatized dogs.

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The absence of glycosuria and the high sugar tolerance in myxoedematous individuals led us to undertake the experiments cited in this brief report.

Dog No. 100, male, weight 14 kilo., partial pancreatectomy performed January 12, 1921. Urine positive for sugar the following day. It persisted in amounts of from 2 to 3 per cent. until January 19, when both inferior thyroid arteries were ligated. Glycosuria continued until January 26, 1921, when complete thyroidectomy was done, sparing the parathyroids. Urine became negative for sugar on the following day and continued so. On February 5, 1921, with blood sugar 95 mgms. an additional 3.4

gms. of pancreatic tissue was removed with no change in the urinary findings. On February 9, blood sugar was 86 mgms. On this day 150 gms. glucose were introduced by the stomach tube. Tests for urinary sugar remained negative. On May 9, rest of the pancreas, amounting to 10 gms. was removed. Urine continued negative for sugar until May 14, when intestines prolapsed through wound, followed by death next day. Autopsy revealed complete absence of pancreatic tissue. His blood sugar was 66 mgms. before the last pancreatectomy and his weight 15.9 kilo.

Dog No. 106, male, weight 7.52 kilo., complete pancreatectomy on March 2, 1921; weight of removed pancreas being 18.2 gms. Urine positive for sugar, beginning day following operation in amounts varying between 5 and 6 per cent. On March 5, both superior and inferior thyroid arteries were ligated. He continued to have sugar in decreasing amounts until March 8, when the urine became negative for sugar. Urine continued to be negative for sugar until March 19, when distemper developed followed by death the next day.

Blood sugar findings were as follows:

March 2, before operation.....	76 mgms.	
" 4, after pancreatectomy.....	250	"
" 5, after ligation.....	192	"
" 6.....	90	"
" 7.....	50	" unreadable.

Autopsy revealed lobular pneumonia involving all the lobes. Complete absence of pancreatic tissue.

Dog No. 111, male, weight 6.66 kilo., complete pancreatectomy done on April 4, 1921. Weight of removed specimen 17 grams. Blood sugar prior to operation 78 mgms. Urine positive for sugar on day following the operation. Blood sugar on April 10, 200 mgms. On this day the right superior and inferior thyroid arteries were ligated. Urine continued positive for sugar until April 17, when the thyroid arteries on the left side were ligated. Blood sugar on this day was 244 mgms. No change in the urinary sugar until April 19, on which day death occurred from tetany. Weight before death 5.66 kilos.

Diet of all the animals was liberal consisting of meat, bread and water. All wounds healed per primam. Further experiments along these lines are in progress.