The characteristics of this hemolytic substance in the serum of tumor dogs have been the subject of further study. The serum loses some, or only little of its power, by being passed through a Berkefeld filter. Heating it to 85° for one hour does not destroy its activity. It differs markedly from the immune bodies known as amboceptors. It resembles in certain respects the hemolytic substances derived by extraction from necrotic tumors.

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On the circulation through the kidneys. I. On vaso-motor reactions. II. The renal blood flow in relation to the pressure in the ureter and bladder. III. The effect of solutions of adrenalin.

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The experiments embodied in this abstract deal quantitatively with the renal blood flow, under different experimental conditions. They were performed upon dogs with the stromuhr described by Burton-Opitz.[1] The right and the left renal veins were used.

Besides the quantitative data, the authors succeeded in obtaining vaso-motor effects on stimulation of the præ, as well as post ganglionic fibers, the constrictory effects being in both cases the most prominent. The constriction of the blood vessels of the kidney was betrayed by a decrease in the venous return from this organ and a fall in venous blood pressure, this change being preceded by a brief increase of flow.

Among the post ganglionic fibers (renal plexus) a nerve was isolated which gave decided vaso-constrictory results.

In another series of experiments the pressure in the ureter was increased while the blood-flow in the corresponding renal vein was being recorded. The pressure was increased by means of air led into the ureter in the immediate vicinity of the kidney and of the bladder. Every increase in pressure from 20–120 mm. Hg resulted in a decrease in the venous return from the kidney and a

[1] Burton-Opitz: Archiv. f. d. ges. Physiologie, 1908.

fall in venous pressure, the decrease being in harmony with the height of the ureter pressure. A pressure of 20 mm. Hg or less remained ineffective when introduced next to the bladder, but produced a weak retardation of the venous flow when led into the upper portion of the ureter.

On increasing the pressure within the bladder, no effect upon the renal circulation could be noticed, not even when the organ was inflated until it burst.

By injecting solutions of adrenalin into the renal vein centrally to the stromuhr, a retardation of the venous flow was produced. The retardation appeared after an interval of from 7–9 seconds. The experiments speak against the presence of vaso-motor nerves in the central veins.

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Some data regarding the portal circulation.

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The stromuhr referred to in the preceding abstract was used in obtaining quantitative data regarding the portal circulation. The experiments so far performed have given an average flow of 1.56 c.c. per second in the splenic vein (weight of spleen 78 grams) and a flow of 1.05 c.c. per second in the mesenteric.

In the case of the spleen, the veins draining the pyloric end of the stomach and fatty tissue of this region were ligated. The stromuhr was then inserted centrally to the last branch draining this organ. The venous pressure was recorded centrally to the instrument. In the case of the mesenteric the stromuhr was inserted distally to the point of entrance of the vena gastro-lienalis.

The nerves innervating the spleen and intestines were stimulated electrically while the blood flow in the veins was being measured. For the stimulation were selected first of all the entire bulk of the præ or post ganglionic fibers, and later on the most prominent fibers of the post-ganglionic paths.

On stimulation of the post-ganglionic fibers innervating the