

TABLE I.
Effects on Blood Pressure of Unanesthetized Dog of Injections of Urine Extracts.

Normal pressure, mm Hg.	Max. pressure, mm Hg.	Total rise, mm Hg.	Period effective, min	Urine equivalent injected*	Urine used
Effects of Urine Extracts of Normal and Hypertensive Individuals.					
94	144	50	10	4 l	Hypertensive
98	148	50	12	4 "	Normal
96	124	28	15	800 cc	Hypertensive
94	114	20	10	800 "	Normal
98	130	32	8	1 l	Hypertensive
98	132	34	7	1 "	Normal
98	136	38	5	1 "	Hypertensive
98	128	30	6	1 "	Normal
Effects of Dog Urine Extract.					
96	128	32	6	1 l	Normal
96	131	35	6	1 "	"
92	100	8	5	1 "	"
94	104	10	4	1 "	"
98	108	10	4	1 "	"
96	114	18	5	1 "	"
98	108	10	5	1 "	"
98	—	0	—	1 "	"
94	132	38	6	1 "	"

*10 cc injected in 30 seconds in each case.

activity of one extract when tested on 2 dogs would produce relatively the same effect and indicated that pressor substances are present in normal dog urine.

Summary. Although Bohn and Hahn found pressor substances in hypertension and Bain found this material only in the normal, the results of these experiments indicated that no significant differences in the amount of pressor substances, other than possible normal variations, existed between the urine of normal individuals and the urine of the 2 essential hypertensive individuals that were tested. Furthermore, the normal dog was found to excrete pressor substances in variable quantities.

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The Unidentified Base in Gelatin.

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Van Slyke and Hiller¹ reported evidence that the phosphotungstate precipitate obtained from hydrolyzed gelatin contained amino acid

¹ Van Slyke, D. D., and Hiller, Alma, *Proc. Nat. Acad. Sci.*, 1921, **7**, 185.

material other than the hexone bases usually found in this precipitate. Other problems prevented continuance of work on the isolation of the material. It was taken up by Van Slyke and Robson² but after preparation of a copper salt, since found to be contaminated with proline, the work was again discontinued by Robson's return to England.

The unidentified base has now been isolated and recrystallized, both as the picrate and as the hydrochloride, and has the composition of a hydroxylysine. After removal of arginine and histidine as silver salts the residual "lysine fraction" is freed of adherent mono-amino acids by repeated precipitation in very dilute solution as phosphotungstate. The greater part of the lysine is removed by addition of enough picric acid to the hot aqueous solution to combine with $\frac{3}{4}$ of the amino nitrogen present. To the mother liquors enough more picric acid is then added to combine with the rest of the amino nitrogen. A picrate of the composition $C_6H_{14}N_2O_3 \cdot C_6H_3N_3O_7$ is crystallized, from a dilution of about 1 to 10, and is purified by recrystallization. It is more soluble than the picrate of lysine, and when heated at the rate of a degree every 3 seconds shows a melting point at 225° . Both the nitrogens of the amino acid react completely with nitrous acid in 10 minutes. There is a marked difference from lysine in speed of reaction; in 3 minutes at 25° under the conditions of the manometric analysis³ lysine evolves only 83% of its total nitrogen, while the new base in the same time evolves 95%.

The monochloride, $C_6H_{14}N_2O_3 \cdot HCl$, was prepared by decomposing the picrate with HCl and ether, removing the excess HCl with Ag_2O , bringing to pH 6 with HCl, and precipitating from concentrated aqueous solution by addition of hot alcohol. The precipitate, at first amorphous, crystallized as rods. The C, H, N, NH_2 , Cl, and amino acid carboxyl⁴ contents were those calculated for hydroxylysine.

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² Van Slyke, D. D., and Robson, W., *PROC. SOC. EXP. BIOL. AND MED.*, 1925, **23**, 23.

³ Van Slyke, D. D., *J. Biol. Chem.*, 1929, **83**, 425.

⁴ Van Slyke, D. D., and Dillon, R. T., *PROC. SOC. EXP. BIOL. AND MED.*, 1936, **34**, 362; *Compt. rend. Lab. Carlsberg*, 1938, **22**, 480.