dissipation of a possible humoral effect from the kidney did not significantly alter the results. (Fig. 1, Col. C.)

Though these findings by no means rule out a specific rôle for the kidney in the regulation of normal blood pressure, they give no support to this possibility and add to the probability that renin, like epinephrine and vasopressin, does not exert a pressor effect under normal conditions.

Conclusions. (1) There was no significant difference between the decreases in blood pressure shown by nephrectomized and sham nephrectomized dogs following splanchnicotomy or chordotomy. (2) These results lend no support to the possibility that the kidney plays a specific rôle in the regulation of normal blood pressure in the dog.

13375

Physiology of Bacteria-Free Culture of *Trichomonas vaginalis*: VI. Effect of Female Sex Hormones on Population.*

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Exacerbations are frequently observed in cases of *Trichomonas vaginalis* vaginitis following menstruation or during pregnancy. In search of a possible explanation of this phenomenon Stein and Cope[1] examined the effect of progynon (Schering) upon contaminated cultures of *Trichomonas vaginalis* and concluded that "the addition of female sex hormone to culture medium stimulated the multiplication of *Trichomonas vaginalis in vitro.*" They also state[1] that "the sex hormone content of menstrual blood may be a more important factor in causing the postmenstrual flare of *Trichomonas vaginalis* vaginitis than the presence of blood serum and possibly also of tissue fragments."

The purpose of the present study was to reinvestigate the rôle of female sex hormones using a bacteria-free culture.

* The authors are indebted to Dr. Ray E. Trussell, Dr. E. D. Plass and Dr. T. L. Jahn for much helpful criticism in the course of this study.

1 Stein, I. F., and Cope, E. J., *Am. J. Obst. and Gynec.*, 1933, **25**, 819.

Solutions of theelol (Parke, Davis Co.), estradiol (Ciba), and estradiol-3-benzoate (Ciba) in 95% alcohol were prepared in 3 dilutions: estradiol-3-benzoate 0.01, 0.001, and 0.0001%; estradiol and theelol 0.1, 0.01, and 0.001%.† In each case 0.02 cc of hormone solution was added to 10.0 cc of sterile culture fluid by tuberculin syringe without the needle attached. The medium which was adjusted to pH 6.0 with N/1 HCl contained 5% human serum in Baltimore Biological Thioglycollate medium without glucose.

Ten cultures were employed for each dilution of the 3 hormones and compared with 10 control cultures which received 0.02 cc of 95% alcohol without the hormone. The inoculum consisted of 0.2 cc of culture fluid obtained by mixing several 4-day-old stock cultures. The incubation temperature was 35 ± 0.5 °C. Populations per cubic millimeter were determined by hemocytometer count at 24-hour intervals until the concentration of organisms was demonstrated to have passed the maximum. The culture tubes were examined for evidence of gross contamination and checked further by streaking on chocolate agar plates. Contamination was demonstrated in 2 cultures; these results were excluded. Table I shows the content in gammas of hormone per tube of culture medium. The population data were taken from the first of 2 series of experiments with parallel results.

As a preliminary check on the effect of alcohol, batteries of 10 tubes with and without 0.2% alcohol were inoculated and the population increases compared in 2 series. Flagellate counts on 6 successive days demonstrated no significant difference.

Selection of the dosage of hormone to be used was based upon rat assays of vaginal discharge from women in the last month of pregnancy. The authors are indebted to Mr. Tom Hernandez of the Department of Zoology for performing these tests. Positive estrous smears were obtained in rats receiving 0.07 cc of vaginal discharge and negative smears from those receiving 0.05 cc. It was, therefore, decided that the hormone concentration employed in the cultures should range above and below the value required to produce such an estrous response since it would be comparable to the concentration encountered in the vaginal discharges of pregnant women.

Reference to Table I will reveal that in no case did the experimental cultures with hormone differ significantly from the control cultures. It is, therefore, concluded that under the conditions of these experi-

† Professor Emil Witschi of the Department of Zoology kindly supplied the hormone solutions which were used and made possible a portion of the work which was carried out in his laboratory.

TABLE I.
Effect of Female Sex Hormones on Population Increase of *Trichomonas vaginalis.*

Hormone	Gammas per 10 cc of culture medium	Avg population per mm³ Day examined 1	2	3	4	5	6
Estradiol-3-benzoate	2.100	29	66	132	221	287	282
	0.210	30	63	119	198	279	272
	0.021	29	76	131	214	271	279
Control		26	67	125	203	276	273
Estradiol	21.000	38	94	190	251	327	322
	2.100	42	58	219	305	329	318
	0.210	33	97	199	306	329	326
Control		36	100	219	311	342	320
Theelol	21.000	36	79	165	231	327	315
	2.100	36	90	181	226	321	318
	0.210	34	85	170	228	324	314
Control		36	100	219	311	342	320

ments the female sex hormones here employed have no effect upon increase in population of bacteria-free cultures of *Trichomonas vaginalis.*

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Formation of an Antirachitic Product from Cholesteryl Sulfates.

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This communication deals with a report of some of the conditions under which an antirachitically active product is obtained from some of the new cholesteryl sulfates recently prepared.[1]

Eck and Thomas reported the formation of an antirachitic product on heating ammonium or potassium cholesteryl sulfate at 220°-250° for 30 minutes. The yields were low, approximately 0.09 I.U. per mg of the ether extract of the heated product.[2] At first the conditions of Eck and Thomas were repeated with slight modifications using the newly prepared barium, pyridonium, silver, as well as the

1 Sobel, A. E., and Spoerri, P. E., *J. Am. Chem. Soc.*, 1941, **63**, 1259.
2 Eck, J. C., and Thomas, B. H., *J. Biol. Chem.*, 1937, **119**, 631.