with the parent within 8 hours, and the remaining 10 were regenerating after 48 hours.

These experiments indicate that there is a chemical influence exerted by calcium chloride and magnesium chloride on budding Hydra. Further experiments of a similar nature are under way.

Experiment IV. Sensitization to heat: Two series of 10 specimens each, and one series of 20 specimens, a total of 40 Hydra, were exposed to ultra violet for varying periods at a temperature between 19° and 20° C. Two additional series of 20 specimens each, a total of 40 Hydra were exposed to ultra violet for varying periods at a temperature between 19° and 20° C., after which they were heated to a temperature of 28° C. in an electric oven. The results of these experiments show that in the first three series with exposures of 10, 5 and 3 minutes respectively, the per cent of deaths were 100, 50 and 35 respectively. In series 4 and 5 with exposures of 5 and 3 minutes respectively plus a rise in temperature, the per cent of deaths were 55 and 35 respectively.

These results indicate that exposure to ultra violet radiation does not induce sensitization to heat on the part of *H. dioecia.* This is not in accord with the results obtained by Bovie,[2] in which he found that Paramecia exposed to fluorite rays were sensitized to such an extent that they no longer were able to withstand their normal optimum temperature.

The lethal effects of ultra violet radiation on Hydra appear to be due to coagulation of the protoplasm.

This is a preliminary report.

[1] Laurens, H., and Mayerson, H. S., PROC. SOC. EXP. BIOL. AND MED., 1927, xxiv, 506.

[2] Bovie, W. T., and Klein, A., *J. Gen. Physiol.*, 1918, i, 331.

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Sedimentation Rate of Erythrocytes and Plasma Proteins Following Prolonged Chloroform Anaesthesia in Dogs.

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Four dogs were anesthetized with chloroform for sufficient periods to insure liver necrosis. The sedimentation rate of the red blood cells, the albumin, globulin, and fibrin fractions from the plas-

TABLE I.

Dog No. 2. Male. Weight 14 lbs. Slight distemper. Chloroform given for 1¼ hours.

Sample No.	Time. Hours after anesthesia	Millimeters settled in 1 hour	Fibrin. Calculated from heparin hematocrit	Plasma.			Total protein	Hematocrit.		Remarks
				Fibrin	Albumin	Globulin		Heparin	Oxalate	
1	24.0	26.0	0.62	0.55	4.55	2.37	7.47	40.0	32.2	Plasma clear straw color
2	46.5	11.2	0.51	0.47	4.10	2.17	6.74	43.2	38.8	Plasma slightly yellow
3	68.5	8.0	0.16	0.14	3.70	2.52	6.36	43.6	36.5	Plasma bright yellow
4	81.0	1.3	0.12	0.11	3.76	2.43	6.30	43.6	38.5	Plasma and urine bright yellow
5	103.5	4.0	0.25	0.24	4.05	2.20	6.49	41.7	39.7	Plasma and urine bright yellow
6	129.5	10.0	0.34	0.33	4.07	2.24	6.64	40.0	38.0	Plasma and urine yellow
7	153.5	36.0*	0.42	0.41	— —	2.50	— —	35.7	34.5	Plasma slightly yellow
8	182.0	43.8*	0.61	0.59	3.46	2.74	6.79	31.0	29.8	Plasma clear straw color

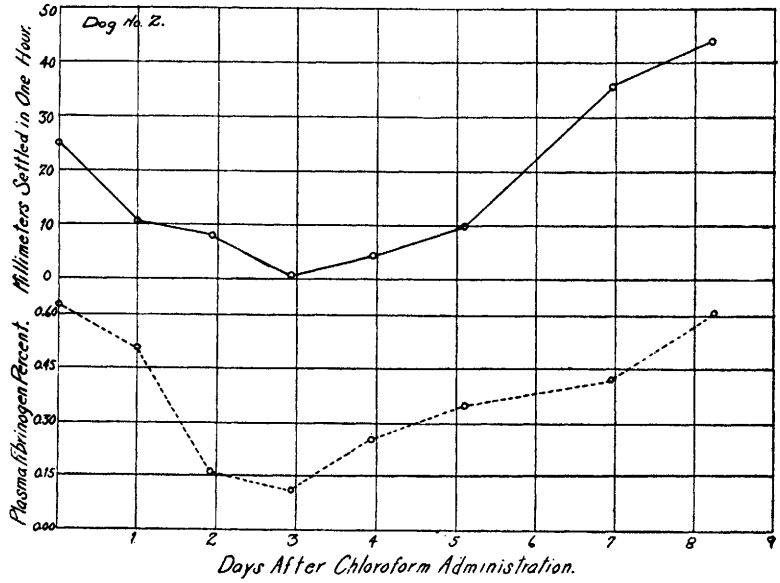
* Packing of the red blood cells was occurring, making these values somewhat lower than if the settling had not been impeded.

ma, and the hematocrit values were determined quantitatively.

The fibrinogen concentration in the plasma was considerably decreased during the height of the chloroform effect, but returned rapidly to normal during the recovery. Paralleling this drop in the fibrinogen, the sedimentation rate diminished, and later increased as the dog returned to normal. There was no significant variation in the albumin and globulin fractions. Relative increases in the bile pigments of the plasma and urine and of the lipoids of the plasma were noted.

The following table gives the data for Dog No. 2, characteristic of the series. In addition the chart given below shows graphically the relation between the rate of settling and the fibrinogen.

CHART 1.



These experiments tend to confirm the belief that the rate of sedimentation of the red blood cells is at least in part dependent on the fibrinogen content of the plasma.

This is a preliminary report.