

In all of them the bloodsugar dropped to normal after incomplete removal of the gland on the left side at the beginning, but it increased later and has remained high.

While their weights were, 9, 7, and 10.8 kilos, respectively, the former dog showed a gain in body weight of 2.6 kilos thirty-eight days after the last operation; the second one 0.6 kilo fifteen days after the last operation; and the third dog 0.4 kilo fourteen days after the last operation. They all gained the losses in body weight which followed pancreatectomy.

As these dogs showed after incomplete thyroidectomy, high bloodsugar and a tendency to adiposity, we believe, therefore, to have produced in these animals a condition resembling the pre-diabetic state in man, *i.e.*, hyperglycemia and increase in body weight.

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A chemical method of assaying strophanthus preparations.

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The method is based on the same principles as one for digitalis recently reported by us.¹ It is a colorimetric method making use of Baljet's² reaction, which takes place between the active principles of strophanthus and dilute alkaline picrate solution, giving an orange red color.

The method consists of first decolorizing the tincture, or other solutions of strophanthus, with lead acetate and then removing excess lead acetate with sodium phosphate. The decolorized solution is then treated with an alkaline picrate solution; the characteristic color develops in 20 minutes. As a standard for comparison a Ouabain solution is used in which the color is developed in a similar manner.

In the table below are given the results of this method compared with those by the Hatcher and Brody³ cat bioassay method.

¹ Knudson, A., and Dresbach, M., *Jour. Pharm. and Exp. Therap.*, 1922, xix, 268. This method will be reported in full in the *Jour. Pharm. and Exp. Therap.*

² Baljet, Henry, *Schweiz. Apoth. Ztg.*, 1918, lvi, 71-73 and 84-88.

³ Hatcher, R. A. and Brody, J. G., *Amer. Jour. Pharm.*, 1910, lxxxii, 360-372.

It will be seen that the agreement between these two methods is very close. The chemical method permits of a direct determination of the amounts of strophanthin.

ASSAY OF STROPHANTHUS PREPARATIONS.

Spec. No.	Kind of Preparation.	Chemical Assay.	Biological.	
			Assay.	No. of Det.
		mg. = c.u. ¹	mg. = c.u.	
7	Strophanthus, amorphous, Merck . .	0.135	0.116	2
34	Tincture strophanthus	7.8	7.6	2
42	" "	8.7	8.7	3
44	" "	1.95	1.78	5
45	" " , hispidus seeds	1.87	2.04	3
46	" " , kombe seeds .	3.06	2.85	4
47	Infusion strophanthus hispidus . . .	1.26	1.24	3
48	" " kombe	2.88	3.08	3
47	" " hispidus	1.75	1.51	3
47	" " one month old	1.19	1.40	3

¹ c.u. = cat unit of Hatcher and Brody.

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Regeneration in *Spathidium spathula* and *Blepharisma undulans*.

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In a study of regeneration of form and function at various phases in the life history of the infusorians *Spathidium spathula* and *Blepharisma undulans*, it has been determined that the power of restoring lost parts and of continuing normal existence is in all cases dependent upon the same factor, the nuclear content of the fragment. Individuals of known pedigree were cut transversely, and the behavior of the fragments observed until regeneration and division or regeneration and death had occurred. During the vegetative state, regenerative power is highly developed in both ciliates, but because of the more distributed condition of the nucleus in *Spathidium* than in *Blepharisma* relatively smaller fragments from either extremity of the former are capable of com-