cord. In this instance[7] the only apparent changes were vacuolization and sclerosis of the neuromes and possibly satellitosis.

These 2 cases remind me very much of Landry's[8] ascending paralysis. Therefore, I would suggest that when a case of ascending paralysis of unknown etiology and without any histo-pathological changes, as originally described by Landry and confirmed by Ormerod and Prince, Seifert, Rapper and others, or with very slight changes as described by Buzzard,[9] Williamson,[10] Stafford[11] and others, is encountered, the possibility of an unusual reaction to the virus of poliomyelitis be kept in mind and a piece of cord be removed, aseptically, for animal passage.

Conclusions. 1. A *Macacus rhesus* monkey infected with the virus of poliomyelitis ran an unusually slow course, which simulated the diphasic type found in the human. 2. The histo-pathological findings of the cerebro-spinal axis were essentially normal, but the diagnosis of poliomyelitis was made by successful passage of cord emulsion into other monkeys.

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Extraction of an Emulsion-Stabilizing Substance from Nitella with Distilled Water.

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Nitella cells, kept in distilled water for 3 days,* lose their irritability and their characteristic behavior with potassium.[1] This is apparently a result of the extraction from the cell surface of some organic substance or substances, which we may designate as *R*. Presumably *R* is constantly produced by the normal metabolism of the cell and accumulates in the cell surface if the cell is bathed by a

[7] Kling, C., Pattersson, A., and Wernstedt, W., Epidemic Infantile Paralysis, Report from the State Medical Institute of Sweden to the XV International Congress of Hygiene and Demography, Washington, 1912.

[8] Landry, *Gazette Hebdomodaire de Médecine et de Chirurgie,* 1859.

[9] Buzzard, E. F., *Brain,* 1907, **80**, 77.

[10] Williamson, R. T., Diseases of the Spinal Cord.

[11] Stafford, J. S., *Lancet,* 1915, **1**, 1172.

* This exposure to distilled water produces no sign of injury and such cells live indefinitely when transferred to pond water.

[1] Osterhout, W. J. V., and Hill, S. E., *J. Gen. Physiol.,* 1933, **17**, 87, 99, 105.

balanced solution. In distilled water, or dilute solutions of alkali chlorides, *R* is dissolved from the surface more rapidly than it enters it.

Can the giving off of substances be detected? Groups of 5 *Nitella* cells were stored in 10 cc. of the solutions indicated in Table I, in

TABLE I.

10 cc. of solution was placed in each 15 cc. glass stoppered tube. The solutions in Tubes, 3, 6, and 9 were saturated with $CHCl_3$ before adding the cells.

After 3 days the cells were removed, 3 cc. of $CHCl_3$ added and the tube well shaken. The sign + indicates the presence of a substance (or substances) which stabilizes the emulsion; the sign — indicates its absence.

Tube No.	1.	H_2O	—
	2.	H_2O + 5 *Nitella* cells	+++
	3.	H_2O + 5 *Nitella* cells + $CHCl_3$	+
	4.	Solution A	—
	5.	Solution A + 5 *Nitella* cells	—
	6.	Solution A + 5 *Nitella* cells + $CHCl_3$	+
	7.	0.001 M $CaCl_2$	—
	8.	0.001 M $CaCl_2$ + 5 *Nitella* cells	—
	9.	0.001 M $CaCl_2$ + 5 *Nitella* cells + $CHCl_3$	+

15 cc. stoppered test tubes. After 3 days, the cells were removed, 3 cc. of $CHCl_3$ added to each tube, and the tubes vigorously shaken. In Tubes 1, 4, 5, 7, and 8 the emulsion broke up in a few minutes, the water and $CHCl_3$ forming discrete layers. In Tubes 3, 6, and 9 the $CHCl_3$ settled in large drops, which coalesced in the course of about 1 hour. In Tube 2, which had contained distilled water and *Nitella* cells, the $CHCl_3$ layer was broken up into many very small drops, and the emulsion persisted for days.

It is evident that cells which show no signs of injury can give up to distilled water substances which stabilize an emulsion of $CHCl_3$ and water. This action is very much less when the cells are bathed by calcium solutions or a balanced solution such as Solution A.† More of *R* is given up to distilled water by intact *Nitella* cells in 3 days than can be extracted from the killed cells, thus supporting the idea that *R* is constantly produced and given off.

† For the composition of Solution A, a balanced solution, see Osterhout, W. J. V., and Hill, S. E., *J. Gen. Physiol.*, 1933, **17**, 87.