On the basis of these results we feel that the conclusion is justified that thiolhistidine is not present in the insulin molecule.

8377 C

Resistance of the Spider Monkey (Ateles ater) to Infection with the Virus of Acute Anterior Poliomyelitis.

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Monkeys are the only animals definitely known to be susceptible to poliomyelitis and generally speaking, varieties of old world monkeys seem more susceptible[1, 2] than those of the western hemisphere. Of the new world monkeys members of the genus *Cebus* (ringtail) have been thoroughly investigated. Although transmission of the experimental disease to a *Cebus* monkey has been reported in one instance[1] this South American species can now be considered to be completely refractory.[2, 3, 4] Although not an inexpensive species, the spider monkey like the ringtail can be obtained with relative ease on the Pacific Coast and the shortage of *Macacus rhesus* specimens for titering serum in the 1934 poliomyelitis epidemic in Los Angeles made it desirable to reexamine the susceptibility of the spider.

We are indebted to Doctor Simon Flexner for *Macacus rhesus* cord infected with his well-known mixed (M. V.) virus. This was used as a 10% suspension in buffered saline. Inoculations were made intracerebrally in the usual manner. Typical symptoms and paralyses occurred in all of the *Macacus rhesus* specimens which were inoculated. When no symptoms had developed in the spider monkeys after 10 days a second or accelerating dose of 1 cc. of the suspension was injected.[5, 6] One spider monkey was observed for 30 days after the first injection and the other 2 for 60 days without showing symptoms. At the end of 60 days one was killed and a

[1] Flexner, S., and Lewis, P. A., *J. Exp. Med.*, 1910, **12**, 227.

[2] Flexner, S., and Lewis, P. A., *J. Am. Med. Assn.*, 1910, **54**, 45.

[3] Kraus, R., and Kantor, L., *Rev. d. Inst. Bact.*, 1917, **1**, 43.

[4] Jungeblut, C. W., and Engle, E. T., PROC. SOC. EXP. BIOL. AND MED., 1932, **29**, 879.

[5] Flexner, S., *Science*, 1931, **74**, 520.

[6] Flexner, S., *Science*, 1933, **77**, 413.

brain suspension of the injected area injected intracerebrally into a *Macacus rhesus*. This monkey did not develop the disease.

TABLE I.

No.	Species	Sex	Weight Kg.	Volume Suspension cc.	Max. Temp. F.	Paralysis days	Death days
1	*Macacus Rhesus*	♀	2.8	1.00	104.0°	5	7
2	" "	♀	3.8	0.75	105.8°	9	10
3	" "	♀	3.5	0.50	105.2°	6	6
4	" "	♂	2.9	0.10	106.1°	6	9
5	*Ateles ater*	♀	3.3	0.50	100.4°	Second dose 1 cc. virus suspension 10 days after first.	
6	" "	♂	3.6	1.00	101.6°	Second dose 1 cc. virus suspension 10 days after first.	
7	" "	♀	4.1	1.50	102.8°	Second dose 1 cc. virus suspension 10 days after first.	

Conclusions. The spider monkey, *Ateles ater,* like other new world varieties, is naturally refractory to experimental inoculation with poliomyelitis virus (monkey passage).

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Albumin-Globulin Ratios in Synthetic Solutions from Specific Gravity and Relative Viscosity Measurements.

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Nugent and Towle[1] have reported specific gravity values for 33 solutions of beef serum albumin, serum globulin and mixtures of the 2 in the range from 0 to 12% total protein. In all cases the solution contained 0.9% sodium chloride and was adjusted to pH 7.3 to 7.5. Under these conditions, the specific gravity of a solution was shown to be a measure of its total protein content in accord with the finding of Moore and Van Slyke[2] that the specific gravity is a useful measure of total plasma protein in nephritis, more useful in fact than the refractive index, the physical property which has been most widely used in this connection.

At the same time relative viscosity values were obtained for a sim-

[1] Nugent, R. L., and Towle, L. W., *J. Biol. Chem.*, 1934, **104**, 395.

[2] Moore, N. S., and Van Slyke, D. D., *J. Clin. Inv.*, 1930, **8**, 337.