

Table 1. EFFECT OF INITIAL ADMINISTRATION OF ERYTHROMYCIN TO HARTLEY STRAIN GUINEA PIGS FOR A FIVE-DAY PERIOD

Total dosage (mgm.)	Deaths/total	Day of death*	
		Average	Range
7.5	8/15	8.6	8-11
15.0	6/15	9.3	9-10
22.5	8/15	9.6	8-11

* From administration of first dose.

istered and the results obtained are shown in Table 1. The day of death is measured from the time the first dose of drug was given. It is apparent that, in this dose-range, lethality and size of dose are not correlated.

Surviving animals showed no signs of illness. The affected animals, for several days prior to death, refused food, showed ruffled fur, and exhibited a diarrhoea. At autopsy the spleens of these animals were pale and markedly smaller than those of normal animals of the same weight. There were no other gross autopsy findings of note. In additional animals, similar signs and death have been observed to follow administration of as little as 1.5 mgm. of erythromycin.

The surviving animals from the drug regimen shown in Table 1 were observed for 2 weeks after cessation of the drug and appeared normal in all respects. At this time an identical schedule of drug administration for 5 days was re-instituted. This second administration of erythromycin did not produce illness and all animals survived.

The cause of the 'all-or-none' response of these guinea pigs to erythromycin is not apparent. Since other work does not permit further studies at this time, the findings are reported as a matter of record.

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¹ Kaipainen, W. J., and Faine, S., *Nature*, **174**, 969 (1954).

Identical Nature of the Leucocyte Antigens detectable in Monozygotic Twins by means of Immune Iso-Leuco-agglutinins

THE presence of anti-leucocyte antibodies, which are capable of causing *in vitro* the agglutination of certain varieties of leucocytes, and which are inactive on the patient's own leucocytes^{1,2}, is often observed in the blood of polytransfused patients.

Using 28 human sera containing immune iso-leuco-agglutinins of this type, we studied the leucocyte antigens of four pairs of twins. (We are grateful to

Prof. M. Lamy for allowing us to study the blood of these twins.)

Table 1 shows the identical reactions obtained in each pair of monozygotic twins. Comparison with the reactions obtained with a pair of dizygotic twins revealed marked differences.

Confusion caused by the presence of anti-red cell antibodies in the leuco-agglutinating sera were overcome. The naturally occurring antibodies, anti-A, anti-B, or anti-A + B, were absorbed or neutralized beforehand by the water-soluble substances A and B. In the same way, four of the sera used in this study contained irregular antibodies active on red cells (anti-D, anti-C). Numerous other sera containing similar antibodies but without leuco-agglutinins were tested against the leucocytes of donors having the corresponding red-cell antigens always without producing leuco-agglutination. These results suggest the hereditary transmission of the leucocyte characteristics, probably determined by special genes. A study of this mode of transmission in several generations is in progress.

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¹ Dausset, J., Nenna, A., and Brecy, H., *Blood*, **9**, 7, 696 (1954).

² Dausset, J., *Rev. Fr. Etudes clin. et biol.*, **1**, 2 (1956).

Ultra-violet Irradiation of Dry Tobacco Mosaic Virus

WE have previously reported that the infectious nucleic acids obtained from different strains of tobacco mosaic virus have the same sensitivity to inactivation with ultra-violet light¹. The intact strains, however, differ in this regard². Strain U2 has the same sensitivity as the infectious nucleic acid, whereas strain U1 is 5½ times more resistant. It was therefore concluded that the type of combination between protein and nucleic acid that exists in the U1 strain affords appreciable protection from the damaging effects of ultra-violet light.

Since several reports have appeared in the literature which indicate that certain organisms are more sensitive to inactivation with ultra-violet light when irradiated dry than when irradiated wet³⁻⁵, a study was undertaken to determine whether the protection against ultra-violet light damage, observed for the U1 strain, is related to the presence of water during the irradiation.

The technique for the wet irradiation of the tobacco mosaic virus strains has been described². The following technique devised for dry irradiation gave the most consistent results. A 0.05 per cent virus suspension was prepared in M/15 phosphate buffer, pH 6.9-7.0, containing 0.01 per cent crystal-

Table 1. AGGLUTINATION OF THE LEUCOCYTES OF TWINS WITH THE AID OF LEUCO-AGGLUTINATING SERA

P.	Va	Monozygotic twins																												
		Au	Ch	Ce	Le	Di	Ma	So	LS	Dr	Pa	Du	Lm	Bo	Te	Ro	De	Bn	Mg	Me	Bu	Ds	Rb	Bc	Vc	Ba	Ca	Ve	Pu	Lx
J.	Va	-	±	-	+	-	+	+	-	-	+	+	+	+	+	+	-	+	+	+	±	±	+	+	+	+	+	+	+	+
E.	Ro	+	±	-	-	-	+	+	±	-	+	+	+	+	+	-	-	+	+	+	±	±	+	+	+	+	+	+	+	+
D.	Te	+	+	(+)	+	-	+	+	+	+	+	+	+	+	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+
B.	Te	+	+	(+)	+	-	+	+	+	+	+	+	+	+	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+
		Red cell groups: A B Cc D ee Fy(a-) K- M P																												
		Red cell groups: A cc dd ee Fy(a-) K- M N P																												
		Red cell groups: A CC D e e Fy(a-) K- N P																												
		Dizygotic twins																												
L.	Go	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V.	Go	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		Red cell groups: L. GO: A Cc D ee Fy(a-) K- N P V. GO: A cc D Ee Fy(a-) K- N P																												