

Table 1

Total dose (rads)	No. of animals at risk		Per cent leukaemia		Corrected mean time to death from leukaemia (days)	
	Males	Females	Males	Females	Males	Females
0	68	62	86.8	96.7	340 (333)±11	288 (288)±10
10	56	58	85.9	89.6	341 (333)±12	292 (290)±10
50	54	55	72.2	90.9	378 (362)±15	297 (294)±10

adjusted on the basis of a preliminary estimate of the distribution. The correction involves an addition of small magnitude which gives the probable time of death from leukaemia if the other cause had not operated. Corrected means are shown in the right-hand column of Table 1 with uncorrected means in parentheses.

It would appear that, after the doses of X-rays used, there is no evidence of either increase in leukaemia incidence or of accelerated disease in either males or females irradiated *in utero*. On the contrary, in males after 50 rads there may be a decrease in incidence of leukaemia with an increased mean time to death from leukaemia.

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HÆMATOLOGY

Hæmagglutinins from *Clerodendrum viscosum* Vent

THE capacity of certain plant proteins closely to simulate the action of various human blood group specific agglutinins is well known; the subject has been reviewed by me¹. Almost all strong blood-group-specific plant agglutinins have been obtained from the genus Leguminosae; recently a good anti-A (anti-A₁) was found in the seeds of *Hyptis suaveolens* Poit of the genus Labiatae². Examination of other non-leguminous plants has now revealed specific agglutinins in the fruit pulp of *Clerodendrum viscosum* Vent (syn. : *C. petasites* Lour; *C. infortunatum* Cook *et al.*, non-Gaert and non-Linn), of the natural order Verbenaceae, a gregarious shrub commonly found throughout India, Burma, Ceylon and the Andaman Islands.

The fruit is about the size of a large garden pea. It has a relatively big seed which contains weak non-specific agglutinins. The fruit pulp was carefully separated from the seed, ground in three times its volume of physiological saline, and filtered. The filtrate, when tested for avidity by the tile method, and titrated by the conventional tube method, was found to agglutinate red cell suspensions of various ABO blood-groups and sub-groups in the following order: O (strongest), A₂, A₂B, B, A₁, A₁B; H-negative cells were not agglutinated. The reactions were not influenced by the *Lea* or *Leb* status of the erythro-

cytes. Thus the agglutinins of *C. viscosum* are anti-H or anti-O.

The agglutinin is inhibited, but not completely neutralized, by a 1/1,000 (w/v) aqueous solution of purified H-substance; it is not inhibited by identical concentrations of similarly purified A, B or *Lea* substances. Similarly, it is inhibited, but not neutralized, by secretor salivas; it is not inhibited by non-secretor salivas. The agglutinin is inhibited (two tubes) by 2 per cent salicin; it is not inhibited by 2 per cent L-fucose. It thus belongs to the little-understood group of anti-H agglutinins, which are not inhibited by L-fucose, a sugar which is an important structural determinant of H-specificity³.

The *Clerodendrum viscosum* agglutinin would be useful for making the A₁: A₂ distinction, particularly when used in parallel with the anti-A₁ agglutinin from *Dolichos biflorus* seeds. It is not recommended for general use in making the secretor : non-secretor distinction, for which the anti-H agglutinin from *Ulex europaeus* seeds would be more reliable. However, it could be used for this purpose by those familiar with its properties, particularly in countries such as India, in which other plant sources of anti-H are not readily available. It might also be useful, as an addition to the heterogeneous ranks of anti-H reagents, in research on the H-character or characters of erythrocytes and secretions.

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Hæmoglobin P in a Family of Southern Italian Extraction

THE larger part of abnormal hæmoglobins described in world literature has been observed, in sporadic form, among the people of Italy. As a matter of fact, Silvestroni and Bianco *et al.* have identified¹⁻³ not only many cases of hæmoglobin S, the presence of which in Italy was known for some time, but also cases of hæmoglobins L, D, G, K, H and A₂ abundant in non-microcythæmic (or thalassæmic) subjects.

Now another abnormal hæmoglobin, P, has been found in four members of an Italian family originating from Calabria. During work on the electrophoresis of the hæmoglobin of microcythæmics, a carrier of microcythæmia (or thalassæmia minima), F. Bettina, aged seventeen, was first found, and later three of her brothers (F. Francesco, aged