Table 1. EFFECT OF TRANQUILLIZING AGENTS ON MORTALITY-RATES, BODY-WEIGHT AND *LD*50 VALUES

Agent	Concentration (mgm./ml.)	Tranquillizer mortality (per cent)	Terminal body-weight	Difference between test and control (per cent)	*P* value	*LD*50 (mgm./kgm.)	Difference between test and control (per cent)	*P* value
Control	1 ml. distilled water	0	168·7±1·3			599·3±40·2		
Chlorpromazine hydrochloride	0·1	3·3	151·3±2·6	−10·3	< 0·001*	606·4±48·1	± 1·2	0·88
Azacyclonal hydrochloride	1·0	0	159·9±2·2	−5·2	0·05*	665·3±51·0	±11·0	0·20
Promazine hydrochloride	0·1	12·5*	152·8±0·7	−9·4	< 0·01*	700·4±39·8	±16·9	0·03*
Reserpine	0·007	26·7*	145·7±2·9	−13·6	< 0·001*	699·3±53·3	±16·7	0·08
Hydroxyzine hydrochloride	0·07	18·9*	135·7±3·1	−19·6	< 0·001*	816·6±35·5	±36·3	0·001*

* Difference between test group and control is significant.

body-weights of the treated rats in the dosages and time patterning of these experiments. Prior to histamine administration, all tranquillizers except azacyclonal hydrochloride and chlorpromazine hydrochloride caused significant increases in the mortality-rates of the rats during the two-week period. A preliminary study with reserpine concentrations of 0·1 mgm./ml. had to be discontinued after 7 days due to the excessive mortality-rate. Although Gaunt *et al.*[2] do not indicate the mortality-rates caused by various reserpine concentrations, they do state : "In work with normal rats, we found that 10 mcgm./100 gm./day of reserpine was not well tolerated when given for prolonged periods of time. It interfered with growth, appetite, etc., and we considered it unsuitable for chronic use".

In conclusion, hydroxyzine hydrochloride, reserpine and promazine hydrochloride when administered for two weeks caused marked increases in resistance to histamine as measured by histamine *LD*50. Except for azacyclonal hydrochloride, increase in resistance to histamine was associated with loss in body-weight and increase in pre-histamine administration mortality.

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Slow Contraction of Smooth Muscle produced by Human Plasma

HUMAN blood plasma or serum produces a delayed, slow contraction of the isolated ileum of the guinea pig. This effect is best observed with dialysed plasma, since dialysis eliminates the quick-contracting agents[1]. Recently, Gabr[2] described the isolation from the *G*.2 fraction of human plasma[3] of a fatty acid which has an effect similar to that of plasma on the isolated ileum of the guinea pig.

Preliminary experiments carried out on processed human plasma for transfusion purposes showed that storage at room temperature of liquid plasma[4] changes the character and potency of its contracting effect on the isolated ileum. It has also been observed that processing of the plasma with kaolin[5] and pooling of the plasma derived from stored banked blood produce similar changes. These observations may be summarized as follows :

(1) Storage of liquid plasma at room temperature under sterile conditions for six months decreases its toxicity for the isolated ileum of the guinea pig. The muscle contraction starts more slowly, and the recovery of the smooth muscle takes a longer time after repeated washings of the preparation with the test fluid (Tyrode solution).

(2) Processing of human plasma with kaolin considerably decreases its effect on the isolated ileum. Like normal plasma, kaolin-processed plasma becomes less toxic when stored for six months at room temperature.

(3) Pooled human plasma is less active on the isolated ileum than single-donor plasma. This effect seems to depend on the size of the plasma pool. Plasma pools derived from ten bottles of banked blood were found to be less active on the isolated ileum than plasma pools derived from seven bottles of banked blood. Again, the latter pools were less active than smaller pools derived from three blood bottles. In the case of big plasma pools, the onset of muscle contraction was much slower, and the summit of contraction often declined a few seconds after.

(4) No relation could be found between the toxicity of pooled plasma and the group types of the blood bottles from which the plasma was separated.

(5) The effect of pooled plasma on the isolated ileum of the guinea pig decreases slightly after standing for one week at room temperature prior to freeze-drying.

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Barbiturate Nystagmus and the Mechanisms of Visual Fixation

WHEN a human subject follows a moving object with his eyes, they perform movements of two types[1,2]. There are smooth pursuing movements and rapid jerky changes of position known as saccades. Fig. 1*a* is a record of the position of an eye which is fixating a small spot of light in an otherwise totally