

Letters to the Editor

Reactivity of rats to dextran

SIR.—A single intraperitoneal injection of dextran produces in rats an inflammatory anaphylactoid reaction which is mediated chiefly through a release of 5-hydroxytryptamine and histamine (Parratt & West, 1957). Not all rats of the Wistar strain, however, react to this injection and also fail to respond to subsequent injections. The animals which do not respond to any of three weekly injections of dextran have been referred to as non-reactors (Harris & West, 1963), and non-reactivity has been shown to be a genetically-controlled recessive character.

Recently, the opportunity arose to test a large batch of male and female Wistar rats from a colony (Wellcome Research Laboratories, Beckenham) which had not previously shown non-reactivity. They were injected intraperitoneally with dextran (Intradex, Glaxo) at doses of 180 mg/kg, and scored for reactivity (gross oedema of the extremities) over the next 4 hr. Those which did not react were re-injected with dextran on the next day and again 5 days later. Ten out of 500 animals (2%) failed to respond after each of these 3 injections (see Table 1); they were classed as non-reactors, but this was modified

TABLE 1. THE REACTIVITY OF WISTAR RATS OF THE WELLCOME COLONY TO DEXTRAN

| Injection No. | Number of rats injected | Number reacting | Number dead |
|---------------|-------------------------|-----------------|-------------|
| 1 | 500 | 417 | 25 |
| 2 | 83 | 50 | 0 |
| 3 | 33 | 23 | 0 |
| 4 | 10 | 10 | 0 |
| 5 | 10 | 10 | 0 |
| 6 | 10 | 10 | 0 |

when it was shown that these rats responded to the fourth, the fifth and the sixth injection of dextran, given at weekly intervals. The classification of non-reactors proposed by Harris & West (1963) appears therefore to require modification; failure to respond to at least four weekly injections of dextran is probably the better definition of non-reactivity. The reason why 25 rats (5%) in the present experiments died after the first injection of dextran is unknown but it may be due to dehydration after a long journey.

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References

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