the statement that "it is not necessary to assume that the soluble antigen in a highly dispersed form ever gets into the allantoic cavity in sufficient amount to be demonstrable". This ignores all previous work on the components of infected allantoic fluid, in which the presence of such soluble antigen has been repeatedly demonstrated<sup>3,4,5</sup>.

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## Pregnancy Test using Male Toads

STARTING in November 1948, a series of tests1 for pregnancy were performed using the native male toad, Bufo melanostictus Schneid. Specimens of urine from women pregnant from six weeks to seven months were used. In each series, two or more experimental toads were used. Controls in each series were injected with urine from a woman known not to be pregnant.

5.0 c.c. of urine was injected into the dorsal lymph-sac of each toad. Three hours later, a few drops of urine were obtained from the cloaca by means of a pipette and examined. The degree of reaction varied somewhat; in some cases, clumps of spermatozoa were visible as white flocculent masses even by the naked eye.

There were some false negatives but no false positives, and some toads gave positive reactions even with urine from women who were six and seven months pregnant.

A full report of this work will be published in the

Burma Research Journal.

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## Position of 'Luxate' in the Third Linkage Group of the House Mouse

The occurrence of a new strain of mice (Mus musculus, L.) resembling the extinct souris luxées of Rabaud¹ has been reported²; these mice show extensive abnormalities of the hind limbs, including absence of the tibia (hemimelia). The condition was found to be due to the presence in homozygous form of a single mutant gene which was called 'luxate', symbol lx. This has been found to be in the linkage group designated as the third by Dunn, Grüneberg and Snell<sup>3</sup>, closely linked to macrocytic anæmia, Wv 4. The other markers known to be in this group are recessive spotting, s, hairlessness, hr 5, and pirouette,  $pi^{6}$ ; s, hr and Wv are known to lie in that order.

Linkage tests now completed between lx and s indicate a recombination fraction of  $50.5 \pm 2.5$  per cent (standard error); the  $kx/W^v$  recombination fraction is  $16\cdot 0 \pm 1\cdot 5$  per cent. These establish that s and lx are on opposite sides of  $W^{v}$  and that lx is therefore now an end marker, the order being  $s, hr, W^v, lx$ .

The conclusion that lx lies trans-W with respect to s does not rest on a claim that the s/lx recombination fraction (50.5  $\pm$  2.5 per cent) is greater than that of s/W; the latter has been estimated to be  $46.6 \pm 1.1$  per cent<sup>8</sup> and, therefore, does not differ significantly from the former. The establishment of the trans-W position of lx rests on the fact that a hypothetical cis-W position is incompatible with the data on the linkages of hr. If lx were in the cis-W position, the s/lx recombination fraction would have to be smaller than that of hr/W; this is a necessary consequence of the fact that the s/hr recombination fraction  $(8.4 \pm 1.9 \text{ per cent})^{5.6}$  is significantly smaller than that of  $lx/W^{v}$   $(16.0 \pm 1.5 \text{ per cent})$ . The s/lx recombination fraction (50.5  $\pm$  2.5 per cent) is, in fact, significantly greater than that of hr/W (42.1  $\pm$ 2.0 per cent)<sup>7,8</sup>; the cis-W position for lx is therefore

excluded and the trans-W position must be accepted. I wish to thank Prof. C. H. Waddington and Prof. R. A. Fisher for their interest in this work; it was aided by funds from the Medical Research Council.

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## Higher Technological Education in Great Britain

In the last paragraph of the leading article entitled "Training for Research" in Nature of November 19, it is stated that "the responsibility for the development of higher technological education has been placed on the University Grants Committee"

This statement is incorrect, and may give rise to false impressions. The responsibility for the development of higher technological education in England and Wales is not placed in the hands of any one body. The University Grants Committee is, of course, responsible for this duty in university institutions, but for the development of higher technological education in technical colleges the responsibility lies with the Ministry of Education, and through the Ministry with the local authorities and other bodies which provide these colleges. Within the last few years, at the instance of the Ministry of Education, Regional Councils for Further Education have been set up in different areas of the country to promote and co-ordinate technical education in their areas, and in connexion with each of the Regional Councils there is a Regional Academic Board, charged with the duty of developing higher technological education in its area.

The Ministry of Education has also set up a National Advisory Council on Education for Industry It is further understood that a and Commerce. Joint Committee of this National Council and the University Grants Committee has been set up to consider problems in higher technological education as they affect both universities and technical colleges.

In Scotland, the Scottish Education Department discharges functions corresponding to those of the Ministry of Education in England and Wales.

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