THE TOXICOLOGY OF PALMYRAH (*BORASSUS FLABELLIFER*) FLOUR
II. IMMUNODEPRESSIVE EFFECTS

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Disturbances of immune regulation have been claimed to be pathogenetic factors in the development of malignant tumours, notably lymphomas in experimental animals and in humans.

In view of the induction of malignant lymphomas in rats by palmyrah flour, we have investigated Humoral Immune responses (HIR) and Cell Mediated Immune competence (CMIR) in rats fed a diet containing 25% flour for 2 weeks. 5–6 weeks and 7–8 months respectively. For the HIR, the animals were immunised with SRBC and 4 days later the serum and spleen were analysed for antibody and haemolytic plaque forming cell counts respectively. For the CMIR the proliferative response of lymphocytes from peripheral blood and the spleen (LPR) to PHA-P was determined by the uptake of tritiated thymdine.

While no changes in these parameters were detected after 2 weeks of feeding, some depression of responses was noted after 1 month when both haemagglutination titres and plaque forming cell counts in the spleen were significantly lower than in control animals. Limited data from PHA stimulation experiments showed a depressed response in these animals.

The results after prolonged feeding were difficult to interpret. While the majority of animals showed a depressed HIR, enhancement was noted in some animals.

These results together with those from the preceding paper suggests that palmyrah flour exerts a depressive effect on the immune system of rats. The possibility that different subpopulations of lymphocytes may have different susceptibilities to this immuno–depressive action is discussed.

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