Each ganglion consisted of 8–12 small multipolar cells intermingled with groups of non-myelinated nerve fibres. These structures, being morphologically similar to autonomic ganglia, were regarded as fragments from the plexus on the wall of the internal carotid artery.

A small-celled component near the rostral limit of the abducens nucleus was studied with particular care. The cells here are not representative of first-order neurones, and their function is not known.

In the cat³ and the pig^{4,5} a contribution has been reported from the mesencephalic root of the fifth nerve to the trochlear nerve at its decussation. In the case of the sixth nerve, no similar direct connexion was evident. Investigations are now being carried out concerning a possible connexion between the first division of the trigeminal and the oculomotor nerves in the pig; such a connexion has been observed in man and certain mammals by other workers.

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Milk Production and Interval between Milking

In a recent communication¹ results were presented challenging the generally accepted theory that secretion-rate in the dairy cow declines with time in the interval between successive milkings. These Ruakura experiments showed that secretion-rate was constant up to 20–24 hr. It was suggested that, under a twice-a-day milking regime, unequal intervals of considerable magnitude might be employed without any significant difference in milk yield due to direct pressure effects.

An experiment to test this has recently been completed at Ruakura. The work extended over two years. In the first year seven sets of monozygotic twins and in the second year eleven sets were milked such that one member of each pair was milked at equal 12-hr. intervals and the other member at intervals of 8 and 16 hr.

Mean productions for the complete lactations were:

Year	No. of sets	Milk	Fat	Days
12–12 1954–55	7	5628.3	252.4	232
16–8		5461.4	246.1	232
12–12 1955–56	11	6438	316	264
16–8		6555	321	264

These results are not only of obvious theoretical interest but also have important implications for the dairy industry.

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Preferential Uptake of Sulphone by Affected Skin Tissue of Leprosy Patients as detected by a Tracer Method

DIAMINO-DIPHENYL-SULPHONE and a number of its derivatives have been found to be very effective in the treatment of leprosy; but the exact mode of their action on the affected tissue and invading *Mycobacterium* has not yet been definitely established^{1–3}. In the present work, diamino-diphenylsulphone labelled with sulphur-35 was used for studying the time variation of concentration of the drug in blood and healthy and diseased skin tissues of the leprosy patients. An interesting observation was that the drug was found to be localized to a greater extent in the affected tissues compared to healthy ones. Such studies were not possible with the help of earlier colorimetric techniques⁴, as these required tissues in bulk. The method used here was found to be ten times more sensitive than the colorimetric techniques.

Diamino-diphenylsulphone labelled with sulphur-35 (procured from the Atomic Energy Research Establishment, England) was administered to nine patients as a single oral dose of 4 µc./kgm. body-weight. The specific activity of the drug was about 0.75 µc./mgm. After administration of diamino-diphenylsulphone, samples of skin tissues were removed by biopsy from affected sites as well as from adjacent healthy sites, at different intervals. These were finely minced and homogenized with distilled water. The suspension was then uniformly spread over previously weighed copper planchets and dried under an infra-red lamp. Simultaneously with skin samples, blood was also collected from each patient. 0.1 c.c. of blood was similarly dried on the pre-weighed copper planchets. The planchets were reweighed to get the thickness of the sample in mgm./cm.². The thickness of the deposits varied from 4–6 mgm./cm.². They were placed under a previously calibrated end-window Geiger-Müller counter (window thickness 2.8 mgm./cm.²) and the activity of the sample was deduced from the recorded number of counts per minute and the sample thickness⁵.

The concentration of diamino-diphenylsulphone (sulphur-35) in the blood, healthy and affected skin tissues of the leprosy patient is shown in Table 1. It is apparent from the table that the concentration in the healthy skin runs almost parallel to the concentration in blood. Within an initial period of 6 hr. after administration, concentration in blood seems to be 2–3 times that in the healthy skin. If, however, a comparison be made of the concentration of the

Table 1. VARIATION OF THE CONCENTRATION OF DIAMINO-DIPHENYL-SULPHONE IN BLOOD, HEALTHY AND AFFECTED TISSUES

Patient	Hours after adminis- tration	Concentration of diamino-diphenyl- sulphone (in μ c./gm.) in		
		Blood	Healthy skin	Affected skin
Nature of lesion: single				
M. H.	6 hr.	0.035 $\pm$ 0.002	0.013 $\pm$ 0.003	0.143 $\pm$ 0.007
P. M.	18 "	0.019 $\pm$ 0.002	0.014 $\pm$ 0.003	0.140 $\pm$ 0.006
G. H.	24 "	0.008 $\pm$ 0.003	0.009 $\pm$ 0.003	0.084 $\pm$ 0.006
M. S.	144 "	0 $\pm$ 0.001	0 $\pm$ 0.001	0.010 $\pm$ 0.003
Nature of lesion: multiple				
B. M.	6 hr.	0.036 $\pm$ 0.002	0.016 $\pm$ 0.003	0.067 $\pm$ 0.005
M. Y.	18 "	0.008 $\pm$ 0.003	0.005 $\pm$ 0.002	0.064 $\pm$ 0.005
B. D.	24 "	0.010 $\pm$ 0.003	0.005 $\pm$ 0.002	0.083 $\pm$ 0.006
J. S.	72 "	0 $\pm$ 0.001	0 $\pm$ 0.001	0.004 $\pm$ 0.001
M. R.	144 "	0 $\pm$ 0.001	0 $\pm$ 0.001	0.005 $\pm$ 0.002

N.B. The errors indicated in this table are the standard errors of beta-counting only.