Table I

Showing the mean value of measurements in micromillimetre of 100 Langerhans' cells and few of the smallest melanocytes from the black skin of the ear of guineapig

(Figures in parentheses represent the value of standard deviation)

Length of cell	Length of			Breadth of body	Thickness of			Number of dendritic processes
	Cell	Body	Dendritic process		Body	Dendritic process at the root	Dendritic process at the tip	
Langerhans' cell ..	40·40 ± 0·48 (4·77)	8·38 ± 0·05 (4·49)	31·98 ± 0·20 (1·98)	6·36 ± 0·17 (1·72)	1	1	Fine	2·74 ± 0·20 (1·97)
Melanocyte ..	55	10	45	10	2	2	3	5

Table II

Showing in micromillimetre the average measurements of 25 Langerhans' cells each of Types I, II, III and IV prepared from the black skin the ear of the guineapig

(Figures in parentheses represent the value of standard deviation)

Length of the units measured (in micro-milimetre)	Types of Langerhans' cells I	II	III	IV
Cell ..	46·56 ± 0·.7 (1·36)	42·72 ± 0·23 (1·I4)	39·52 ± 0·10 (0·51)	35·52 ± 0·10 (0·51)
Body ..	9	8	7	7
Dendritic process	37·56 ± 0·27 (1·36)	34·72 ± 0·23 (1·14)	32·52 ± 0·10 (0·51)	28·04 ± 0·20 (0·98)

The high percentage of variation observed in the size of the Langerhans' cell as a class is appreciably reduced in the measurement of the individual types of the Langerhans' cell. Taking the Driesches[7] Law of constant volume of cells into account, it can be inferred that the class of cells hitherto known as Langerhans' cell are actually composed of four types of cells now described as Types I, II, III and IV.[8]

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ESSENTIAL OIL CONTENTS OF ROOT IN *BURSERA DELPECHIANA* POISS. *EX* ENGL., IN INDIA

The wood (trunk) and fruits of *Bursera delpechiana* Poiss. ex Engl. on distillation yield 'Oil of Linaloe', used widely as fixative for high-grade perfumery and cosmetic products. This Mexican plant was introduced in India as early as 1912 and a sizable area is now coming up under its plantation in Mysore State. Subba Rao and Nagesa Rao[4] obtained the oil varying from 0·15 to 0·25% w./w. in foliage and 0·15% w./w. in flowers respectively. However, there is neither any description of the root system of Linaloe tree in literature nor any reference of presence or otherwise of the oil therein. Sastry[3] stressed the need for its investigation. This work was undertaken by the authors and the results are briefly summed up here.

Taproot is absent in trees examined by authors because the plantations are raised mostly from shoot cuttings.[2] Lateral roots are given by the underground central axis which extends 4 to 5 m. in length in old trees.[1] It is up to 2 cm. thick, brittle and light in weight. *Epidermis* greyish-brown, papery-thick peeling off in flakes in older roots, *bark* dull-brown 0·3 to 0·4 cm. thick. *Wood* light yellow and the ratio of bark to wood is about 40 : 60 by weight.

Distilling material was obtained from roots of over 30 years old tree. Bark and woods were separated from each other, dried, made into chips, and distilled each separately in Cocking and Middaeton's essential oil determining apparatus for 4–5 hours. The quantity of oil obtained on distillation is given in Table I.

TABLE I

Sample	Quantity	Total oil obtained	Percentage of oil
1. Root-wood ..	52 gm.	Nil	Nil
2. Root bark ..	35 gm.	0·0943 gm.	0·27 % w./w.

It may be seen that the wood is devoid of the oil; the oil obtained from the bark (root) possesses characteristic linaloe odour. It could not be examined physio-chemically because of a very small quantity. Further, the oil in the root-bark though higher in percentage than flowers or foliage, could not be developed into a commercial source because of the meagre root system in the Indian Linaloe trees.

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RAJENDRA GUPTA.
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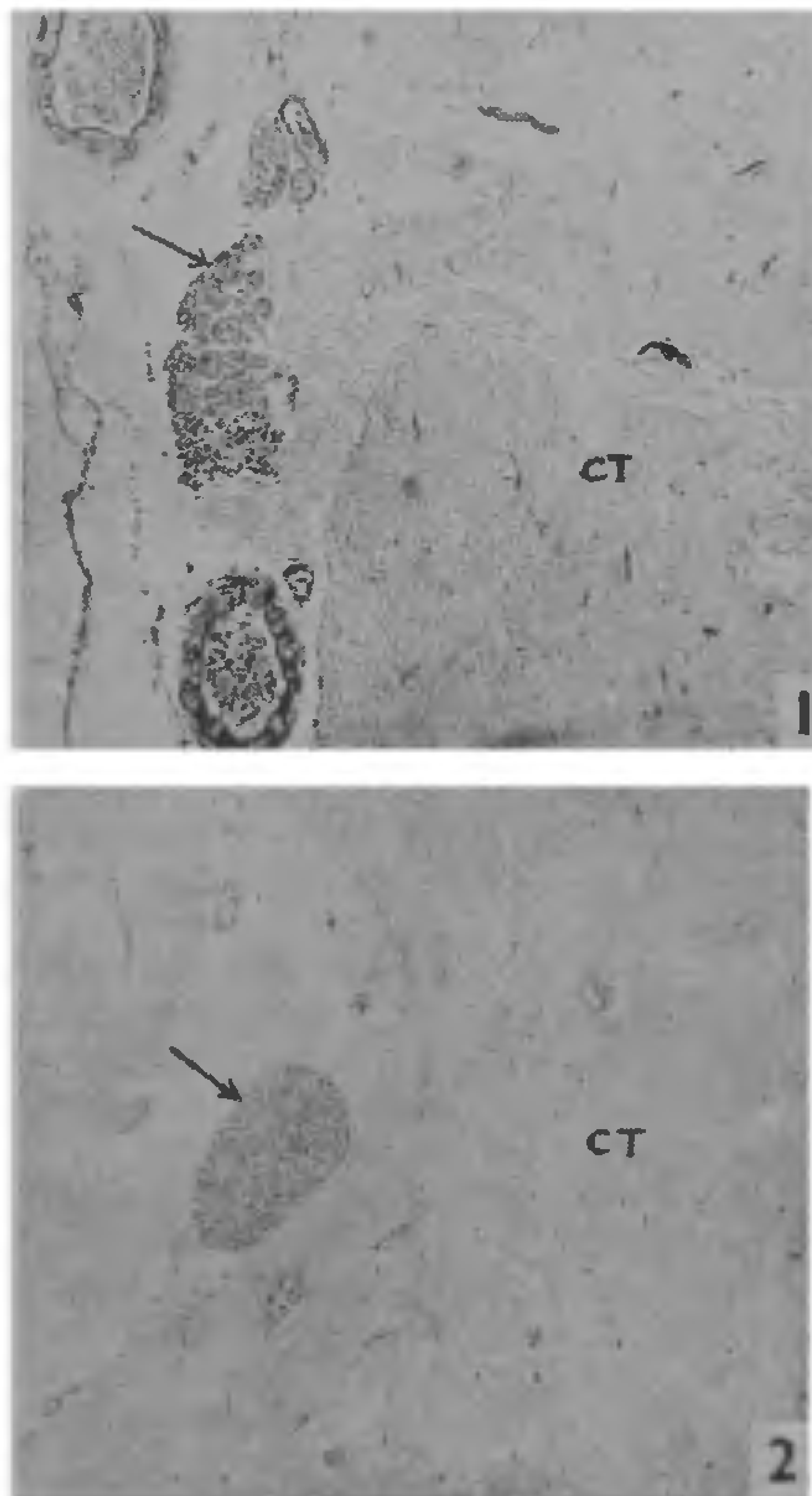
A NOTE ON SOME HISTOCHEMICAL STAINING DIFFERENCES BETWEEN THE MYELINS OF THE CENTRAL AND THE PERIPHERAL NERVOUS TISSUES OF BIRDS

ALTHOUGH the biochemical and biological differences[1] between the myelins of the central and peripheral nervous tissues are on record the differences between the two myelins as seen in histochemically stained microscopic preparations are comparatively little known. Recently Singh[2] has reported the results of some histochemical reactions for lipids in avian central nervous tissues. A further study of these and some other histochemical reactions, *viz.*, acid haematein test, controlled chromation method, copper phthalocyanin method (on paraffin sections of formalin fixed material) and phosphomolybdic acid method,[3] and periodic acid-Schiff (PAS) method,[4] on the peripheral nervous tissues, *e.g.*, spinal ganglia and sciatic nerves of two Indian birds, the parrot (*Psittacula krameri*) and the myna (*Acridotheres tristis*) and also of the rat, revealed some staining differences in their myelin from that of the central nervous tissues.[2]

The acid hæmatein staining of peripheral nervous tissues revealed that their myelin was not



FIGS. 1–2. Fig. 1. Section of the brain of rat showing PAS positive reaction in the myelin (indicated by arrow) of the fibres of a peripheral nerve trunk originating from within the brain (CT). Myelin in the fibres of the central nervous tissue (CT) is seen negative, × 100. Fig. 2. Section of the brain of parrot (*Psittacula krameri*) showing positive PAS reaction in the myelin of the fibres of a peripheral nerve trunk (indicated by arrow). Myelin of the fibres within the central nervous tissue (CT) is seen negative, × 100.

at all stained by acid hæmatein after pyridine extraction, whereas that of the central nervous tissues was always weakly stained by acid hæmatein after pyridine extraction.[2] The two