In the present case, highly homozygous inbred lines of radish have been modelled for the study of chromosome pairing with particular reference to chiasma terminalization. Our study demonstrates a relaxed synapsis for the inbred lines, but this relaxation in chromosome pairing is withdrawn in their hybrids and the original population. Relaxation in chromosome pairing, which is so characteristic of the inbred lines, can be understood in the light of the model of chiasma control, proposed recently by Jones[8]. According to this model, each bivalent contains a very large number of potential sites for chiasma formation. These sites are evenly distributed along the entire length of the bivalent and have uniform but very low probability of chiamsa formation. It is quite probable that forced and prolonged inbreeding might affect these 'sites' in various ways; one of its consequence may be hurried terminalization of chiasmata in the inbred lines (homozygotes). However, this is normalized in the interlinear hybrids and the original population (heterozygotes). Thus, chiasma terminalization in radish is genetically conditioned and bears a definite relationship with homo- and heterozygosity of genes.

Our results also confirm an earlier report that mean chiasma frequency is significantly reduced in the inbred lines of radish in comparison to the interlinear hybrids and the original population[7]. This nas been attributed to the heterozygosity of genes brought about by prolonged and forced inbreeding of an outbreeding and heterozygous population which radish constitutes.

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OCCURRENCE OF SEPTATE MACROSCLEREIDS IN THE BARK OF STEM OF *ANOGEISSUS LATIFOLIA* WALL

INTERNAL hairs (sclereids) in some species of Aroideae were reported to possess a few septa in the lumen[1]. Ananda Rao[2] reported such septa in the sclereids of *Scindapsus*. To our knowledge there is no other report on the occurrence of septate sclerieds. In the bark of stem of *Anogeissus latifolia* short macrosclereids with septate lumen were observed very frequently (darts in Fig. 1 A-D). The wall of the sclereid shows

FIG. 1 A–D. Longisection of macrosclereids showing septa (at darts), nuclei (Fig. 1 D, *N*), and contents of the lumen. A, × 150; B, × 375; C, × 480; D, × 340.

striations of secondary wall and distinct pit canals (Fig. 1 C, D). The lumen is divided into two or three equal or unequal chambers by one or two thin septa. The septum extends only up to the innermost secondary wall layer. Earlier report shows the negative reaction to cellulose tests by such septa[2]. However, the thin septa are found to be PAS-positive in the present investigation (Fig. 1 A, D). The compartments possess one nucleus each (Fig. 1 D). The lumens of the sclereids may be broad (Fig. 1 C) or narrow (Fig. 1 D). Amorphous PAS—positive substance was also observed in the lumen of sclereids (Fig. 1 A, C). The earlier report of De Bary[1] and Aranda Rao[2] confine to long and branched sclereids resembling fibres. Unlike this, our observation, probably, is the first report of occurrence of septate macrosclereids.

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CHOLESTEROL SYNTHESIS IN *COLLETOTRICHUM DEMATIUM* (PERS. EX. FR.) GROVE

Sterols are known to occur in dilute concentrations in a large number of fungi. Ergosterol, a fungi sterol is quite wide-spread and is known from diverse groups of fungi. Its amount is usually 1·0% or less of the total dry weight of the mycelium[1]. A comprehensive survey has been made by Pruess[2] and others[3]. The highest level (1·7%) so far reported is from *Pacilomyces variotii*. Cholesterol, which is a precursor of several metabolites and ergosterol have not been reported previously from the fungi while some other sterols (except ergosterol) have been tentatively identified. The present investigation reports cholesterol in four isolates of *Colletotrichum dematium*. The isolates were obtained from leaf spots of different medicinal plants. The isolates were grown in Asthana and Hawker's medium A and the mycelium was harvested after 10 days of incubation. Preliminary tests for cholesterol were done by the method suggested by Plummer[4] and quantitative estimations by colorimetry[5]. The results are presented in Table I.

Table I

Showing amount of cholesterol in the dried mycelial mats of different isolates of C. dematium

Isolates	Growth yield (in mg)	Total amount of Cholesterol in dried mycelium (mg.)	Percentage of cholesterol
I	89·4	1·143	1·28
II	82·0	1·180	1·44
III	92·2	0·885	0·96
IV	110·8	0·894	0·80

Interestingly, the highest percentage of cholesterol was an isolate (II) which had comparatively a poor growth rate, while the lowest percentage was in an isolate (IV) with maximum growth. This appears to suggest that higher cholesterol content retards growth in *C. dematium*. It may be mentioned that fluctuation in the percentage of sterols as seen here has previously been reported in different single spore strains of fungus[6, 7].

Further work is in progress.

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