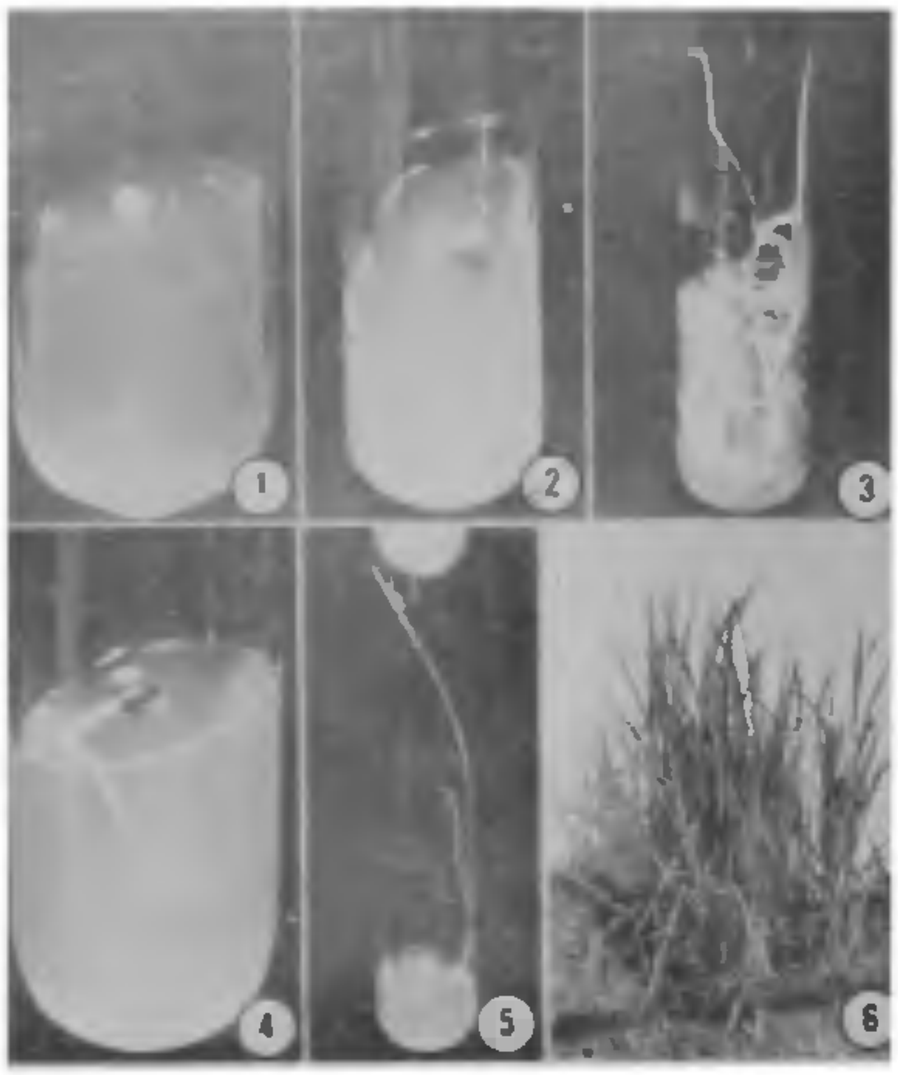

FIGS. 1–6. Induction of growth and morphogenesis in excised endosperm and embryos of rice frozen in *liquid nitrogen*. Fig. 1. Frozen-thawed segments of endosperm 4 weeks after culture on MS + 2,4-D (2 mg/l); note the initiation of callus. Figs. 2, 3. Differentiation of endosperm callus into shoot and plantlets after transfer to MS + IAA (4 mg/l) + kinetin (2 mg/l). Fig. 4. An embryo (excised from a frozen seed) 3 weeks after culture; note the formation of root, but the growth of the shoot apex is suppressed. Fig. 5. A normal plant obtained from a frozen embryo. Fig. 6. Transfer of test-tube plants to soil.

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USE OF METRONIDAZOLE AS A NEW PRE-TREATING AGENT FOR CHROMOSOME ANALYSIS

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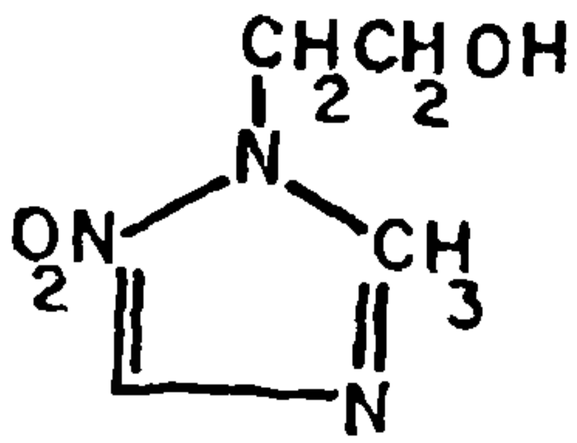
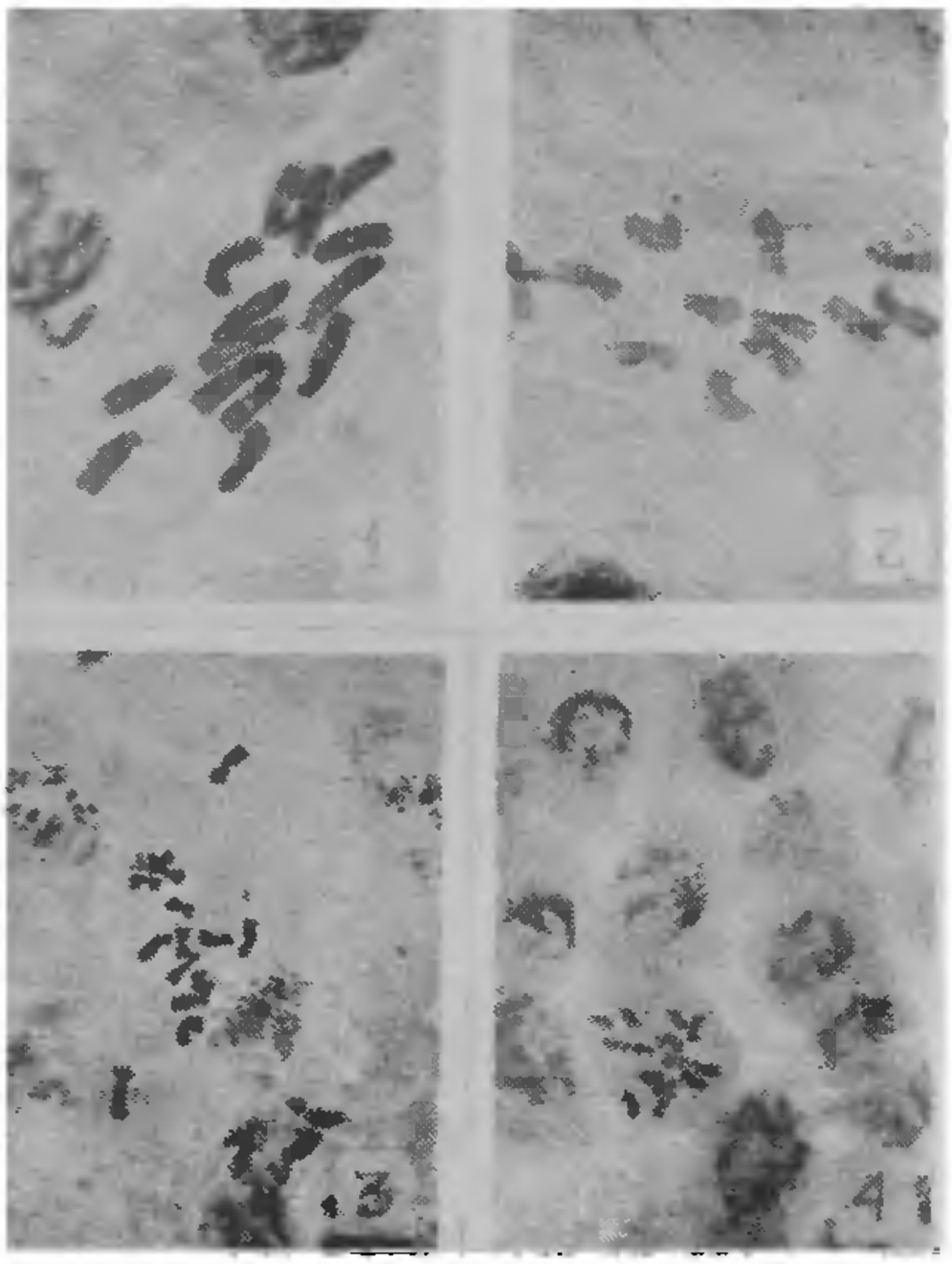
PRE-TREATMENT for the study of chromosomes is effected to bring about the clear scattering of primary and secondary constriction regions[2]. It causes viscosity change in the cytoplasm resulting in the destruction of spindle mechanism. The chromosomes get scattered throughout the cell on solidified plasma, due to pressure applied during squashing. They undergo differential hydration in their segments resulting in the clarification of constriction regions, which are the important landmarks for chromosome analysis. Pre-treatment also results in accumulation of a high frequency of metaphase stages due to the spindle inhibition. A number of chemicals are in use for such a purpose, of which colchicine, para-dichlorobenzene and oxyquinoline are worth mentioning.

While studying the effect of metronidazole on plant chromosomes, it was observed that it could be used as a successful pre-treating agent for chromosome analysis. Metronidazole has the following structural formula:



Metronidazole

The drug is an efficient mitotic poison[1], resulting in the destruction of spindle mechanism. The chromo-



FIGS. 1–4. Fig. 1. *Vicia faba C-Metaphase*. × 1,500. Fig. 2. *Lathyrus sativus C-Metaphase*, × 1,500. F.g. 3. *Lathyrus* species *C-Metaphase*, × 1,200. Fig. 4. *Lens esculenta C-Metaphase*, × 900.

somes exhibit clear morphology with well-marked constriction regions. It has given satisfactory results in a number of plant species including *Allium cepa*, *Nigella sativa*, *Vicia faba*, *Lathyrus sativus*, *Pisum sativum*, *Lens esculenta* (Figs. 1–4). It is well known that some chemicals which induce chromosomal aberrations can also be used for chromosome analysis at suitable concentrations.

Procedure

Treat healthy root tips with 0·25% aqueous solution of metronidazole for about 3 hr, depending on the species. Usually species with shorter chromosomes require shorter duration of treatment. Wash the material thoroughly with water and fix it in 1 : 3 acetic acid : ethyl alcohol overnight.

Squash the material with a drop of 45% acetic acid following staining with a mixture of 2% aceto-orcein NHCl (9 : 1).

June 13, 1979

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SARBHOYOMYCES, A NEW GENUS OF SYNNEMATOUS HYPHOMYCETES

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DURING the survey of hyphomycetous fungi in North East India, the author collected a synnematous fungus growing on the branches of *Nerium indicum* L. The fruiting body of the fungus consists of a terete synnema comprising 2–3 diver ent stalks each bearing a single head at the tip which finally fuses to form a big single head. The fungus is an intermediate form between the genera *Crinula*, *Synnematium* and *Graphium* but differs from them in producing the synnemata comprising the individual stalks. In view of this distinct morphological character the fungus could not be accommodated in any of the known genera for which it is being described here as a new genus. The generic name *Sarbhoyomyces* is proposed in honour of Dr. A. K. Sarbhoy, Mycologist, Indian Agricultural Research Institute, New Delhi 12, for his various contributions towards Mycology.

Sarbhoyomyces gen. nov. Saikia

Fructificatio stipitata e synnematibus erectis vel subcurvatis teretibus singulis vel binatis constituta ; synnema principale e stipite rigido subroseo vel aureo vel olivaceo-brunneo et capitulo globoso vel subgloboso subroseo globulum magnum mucosum conidiorum ferente compositum ; synnema principale stipitibus 2–3 divergentibus quibisque capitulum unum ferentibus, coalescentibus et capitulum unum globosum magnum efformatibus constitutum ; stipites e filis numerosis dense compactis parallelis ad lateram et apices conidiiferis compositi ; conidia ellipsoidea vel ovoidea, ad apicem rotundata, unicellutata glabra biguttulata catenata, in glomerulis muci ad apicem sporophororum cohaerentia.

Fungus phytogenous. Fruiting bodies stipitate, consisting of erect to slightly curved, terete synnemata arising singly or in groups of two. Synnema comprising 2–3 divergent stalks rigid with a globose head at its apex. Stalk at first pinkish, later turning golden to olive brown. Heads pinkish, globose to subglobose, with a globule of conidia in mucous. Individual stalks consist of many closely compact laterally branched, parallel threads bearing conidia at the apex. Conidia ellipsoidal to oval, rounded at the ends, single-celled, smooth, biguttulate, hyaline individually but pinkish brown *en masse*, catenate, cohering in glomerules of mucous at the tips of sporophores.

Sarbhoyomyces biguttulatus gen. et sp. nov. Saikia (Fig. 1)

Fructificatio stipitata, e synnematibus erectis rectis vel subcurvatis e superficie superiora matricis singulis