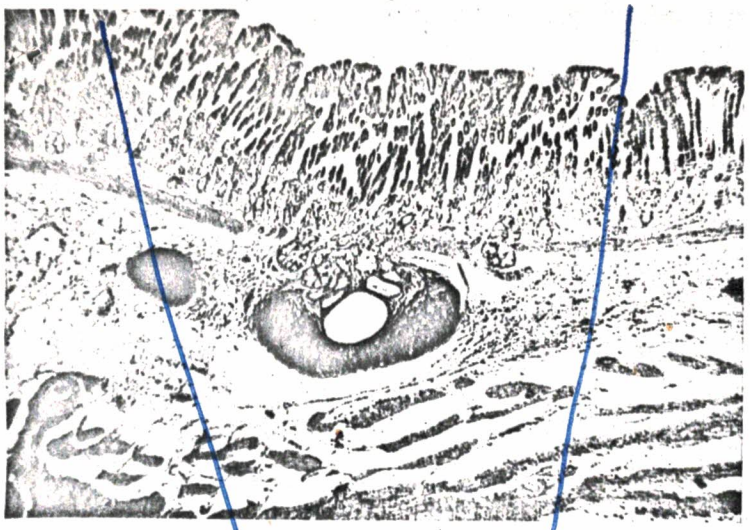

Fig. 1. Case 3/26. PEG plus MC. 240 days. Infiltrating epithelial lesion. Basal glands invading the submucosa at two separate points. Serial sections of this specimen of stomach revealed infiltration of muscularis mucosae by basal glands at three separate points. *Note*, at the left area of infiltration, glands undergoing cystic change completely surrounded by an hyperplastic lymphoid follicle. Oedema of the submucosa is a prominent feature. (van Gieson, X 40)

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Structure of the Secondary Constriction Region of the Satellited Chromosomes in Triticinae

Since the report of the occurrence of a minute chromosome segment in the secondary constriction region of the satellited chromosomes in *Triticum macha* from this laboratory[1]), few

Fig. 1. Polar view of the sat-chromosome of *T. persicum*; arrow indicates the two chromomeres

Fig. 2. Sat-chromosome of *T. aestivum* var. Chinese Spring; arrow indicates the chromatic segment as a single unit

other instances of their occurrence in other species and genera in Triticinae have been reported by us[2]),[3]) and others[4]),[5]) in literature. Further systematic study of the karyotypes from the somatic chromosomes in root tip meristems of diploid, tetraploid and hexaploid species of the genera *Aegilops* and *Triticum*, belonging to Triticinae has revealed the presence of such minute chromatic segment in the secondary constriction region of the sat-chromosomes. Depending on the orientation of these chromosomes, this Feulgen positive structure in the secondary constriction region appears as bi-partiate (Polar view, Fig. 1) or a single segment (side view, Fig. 2). The fine structure is revealed depending on the orientation, right contraction of the chromosomes and the exageration of the secondary constrictions by adequate techniques[6]). The list of species where this structure has been observed so far is presented in the Table, from which it is evident that this type of bipartiate chromomeric secondary constriction region of the large sat-chromosomes is present in all polyploid levels of both *Aegilops* and *Triticum* genera of the tribe Triticinae and probably may be the feature of all long sat-chromosomes in this tribe. The quadripartiate nature of the primary constriction at metaphase which controls the spindle attachment and the movement of the chromosomes has been demonstrated in several plant species[7]) and it appears that the secondary constriction region which controls the nucleolar organization is bipartiate in structure at this stage. Earlier studies have recorded only a thread like Feulgen positive structure in this region called tandem[8]) and the particulate type described here appears to be a second type of structure of this region.

Table. *Species and ploidy nature*

1. Aegilops caudata*): diploid; 2. A. juvenalis[4]): hexaploid.
3. Secale cereale[5]): diploid.
4. Triticum polonicum*). 5. T. dicoccum*) and 6. T. persicum*): tetraploid.
7. T. aestivum a var. Chinese Spring*), b var. C 591[3]), c var. C 591 mutant lines[3]), d var. C 281[3]): all hexaploid.
8. T. macha[1]),*) and T. zukovsky[2]): hexaploid.

*) Present study.

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Interaction of Gibberellins A_3 and A_4 in Cucumber Hypocotyl Growth

No studies of interactions between gibberellins have been reported to date. We have observed the responses of cucumber hypocotyls to gibberellin A_3 (GA_3) and gibberellin A_4 (GA_4), supplied either separately or simultaneously.

Seedlings of *Cucumis sativus* L. cv. "National Pickling" were raised in a greenhouse (temperature: 19—34° C). After 7—8 days, when the cotyledons were expanded and the hypocotyl had reached a length of approximately 3 cm, gibberellins*) were applied to the cotyledons in 10 µl drops of 95% ethanol. Growth rates were determined on the basis of the first 3 days of growth, during which time the rate of elongation was constant. The sample size for each treatment was 10 plants, and each experiment was performed at least twice. Significant differences were estimated by the Duncan multiple-range test[1]), using standard errors obtained by analysis of variance. In the figures, points not followed by the same letter differ at the 1% significance level.

Responses to GA_3 and to GA_4, applied separately, are shown in Fig. 1. GA_4 was effective at 100-fold lower dosages (0·01 µgm per plant) and induced a much greater response than did GA_3 at any given dosage. Note, also, that the slopes