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ABSTRACTS

CONTRIBUTION TO KNOWLEDGE OF THE SPECIAL CALLOSE WALL DURING
MICROSPOROGENESIS IN *Olea europaea* L.

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The presence of a special callose wall during meiosis in the pollen mother cell is well known. This wall contains β -1,3 glucan, a compound which emits secondary fluorescence with aniline blue dye and is rapidly degraded in the tetrad period once meiosis is completed. However, the mechanism by which callose and the organelles involved in the secretion of the wall are synthesized has yet to be clarified. Parallel studies with light, fluorescence and transmission electron microscopy were used to determine the growth curve of the callose wall during meiosis, to identify those cell structures related with callose precursors, and to locate the sites of callose synthesis. The functions classically attributed to the callose wall are also discussed in the light of our findings.

UPSETTING OF MEIOSIS AT POLLINATION OF MAIZE WITH HIGH
DOZE GAMMA-IRRADIATED POLLEN

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Meiosis of the second generation had been studied in maize samples obtained from pollination with the pollen irradiated by high doses.

During pachitene there had been observed frequent maize chromosome breakages at 300 gr and 1000 gr doses with frequency of $15,8 \pm 1,5\%$ and $36,5 \pm 2,4\%$, and deletions and chromosome disconjugation. In diakinesis univalents and open bivalents were observed; during metaphase I chromosome lagging and their irregular moving back towards the poles took place and in anaphase I separate fragments were observed. The plants had either male or female sterility. The transformants and mutants with anomalous kernel were observed.