

Pengamatan kromosom meiosis dari beberapa stages perkembangan bunga hibiscus schizopetalus = Observational study of meiotic chromosome from several stages of flower development of hibiscus schizopetalus

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Abstrak

Penelitian kromosom meiosis dan berbagai tahapan pembelahan sel dari beberapa stages perkembangan bunga Hibiscus schizopetalus telah dilakukan sejak bulan Maret hingga Mei 2018. Penelitian ini mengamati kromosom meiosis dan melihat berbagai tahapan pembelahan sel yang ditemukan pada stage 1 sampai 6 yang dikaitkan dengan proses mikrosporogenesis dan karakteristik kromosom haploid atau diploid yang ditemukan pada tiap stages tersebut.

Sampel kuncup bunga yang digunakan dalam penelitian diisolasi dari stage 1 sampai 6 dan dikumpulkan pada pukul 09.00 WIB. Sampel kuncup bunga yang berada pada stage 1 sampai 3 diisolasi dari bagian calyx dan epicalyx-nya, sedangkan sampel kuncup bunga yang berada pada stage 4 sampai 6 diisolasi bagian anther-nya untuk digunakan dalam penelitian. Preparat kromosom dibuat dengan menggunakan metode squash aceto-orcein.

Hasil pengamatan kromosom menunjukkan bahwa kecenderungan pembelahan meiosis 1 ditemukan pada stage 1 sampai 3, sedangkan pembelahan meiosis 2 cenderung ditemukan pada stage 4 sampai 6. Struktur mikrospora diketahui ditemukan pada stage 4, 5, dan 6, sedangkan struktur polen ditemukan pada stage 6. Peluang ditemukannya kromosom yang bersifat haploid semakin tinggi seiring dengan peningkatan stages perkembangan bunga. Diperlukan studi lebih lanjut terkait kromosom dan pembelahan sel pada stages perkembangan bunga dari tanaman lain.

.....The research on meiotic chromosome and various cell division phases from several stages of Hibiscus schizopetalus flower development had been conducted from March to May 2018. This research observed meiotic chromosome and discovered the various cell division phases that took place in stages 1 to 6 of the flower developmental stages. The association of the results with the process of microsporogenesis and the chromosomal characteristics haploid or diploid which were found at those stages were further assessed.

Flower buds that were used in the study were isolated from stages 1 to 6 and were collected at 9 A.M. Flower buds from stages 1 to 3 were isolated from the calyx and epicalyx, while flower buds from stages 4 to 6 were isolated on the anther part. Chromosome preparation was carried out using the method of aceto orcein squash.

The result of chromosomal observation found that the tendency of meiosis 1 was found in stages 1 to 3, whereas meiosis 2 tended to be found in stages 4 to 6. The microspore structure was found in stage 4, 5, and 6, while the structure of pollen was found in stage 6. Haploid chromosomes were found to increase along with the increase of the stages of flower development. Further studies are needed to learn more about chromosome and cell division in the flower developmental stages of other plants.