

## Studi variasi bentuk bunga *Hibiscus rosa-sinensis* L. secara morfologi, anatomi, dan molekular di Kampus UI, Depok

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### Abstrak

Telah dilakukan penelitian terhadap tiga variasi bentuk bunga *Hibiscus rosa-sinensis* L. (single, crested dan double) di kampus UI Depok. Hasil penelitian menunjukkan bahwa ketiganya berbeda dalam jumlah petal, stamen dan pistillum. Bunga single memiliki 5 petal, stamen 46--101 ( $x=78,68$ ). Bunga crested memiliki petal tambahan berupa staminodium petaloid (7--28,  $x=19,01$ ), intermediet stamen-petal (1--21,  $x=9,2$ ), dan stamen (0--44,  $x=12$ ). Bunga double memiliki staminodium petaloid (5--36,  $x=18,6$ ), intermediet stamen-petal (0--14,  $x=5,32$ ), dan stamen (3--88,  $x=38$ ). Jumlah petal tambahan berkorelasi negatif dengan jumlah stamen. Bunga single memiliki ovarium normal, bunga crested dan double dapat memiliki ovarium yang tereduksi dan bermodifikasi menjadi sepalodi. Seluruh variasi bunga *H. rosa-sinensis* memiliki morfologi polen yang seragam yaitu polen soliter, berbentuk globose, prolat sferoidal hingga oblat sferoidal, apertur polyantoporate, ornamentasi eksin berupa ekinet dengan ujung tumpul, membulat, bercabang dua, dan berlekuk. Ukuran polen berbanding lurus dengan ukuran bunga. Bunga single kecil memiliki polen terkecil ( $dv=152,156\ \mu\text{m}$ ,  $dh=178,312\ \mu\text{m}$ ), dan single besar memiliki polen terbesar ( $dv=174,985\ \mu\text{m}$ ,  $dh=206,023\ \mu\text{m}$ ). Gen AGAMOUS terekspresi pada bunga single, crested, dan double.

.....The single-, crested-, double-flowers type of *Hibiscus rosa sinensis* L. that grown at University of Indonesia, Depok have been studied. The three varieties of flower differ in terms of additional petal, stamen number, and pistillum. Single-flowers have 5 petals, 46--101 ( $x = 78,68$ ) stamens. Crested-flowers have additional petal such as staminodium petaloid 7--28 ( $x = 19,01$ ), and intermediate stamen-petal 1--21 ( $x = 9,2$ ), and 0--44 ( $x = 12$ ) stamens. Double-flowers have 5--36 ( $x = 6,18$ ) staminodium petaloid, 0--14 ( $x=5,32$ ) intermediate stamen-petal, and 3--88 ( $x = 38$ ) stamens. Number of additional petal negatively correlated with the number of stamen. Single-flowers have normal ovaries. Crested-and double-flowers can have a reduced ovaries and modified into sepalodi. All of the *H. rosa sinensis* varieties have similarity in pollen morphology, that is solitary, globose -, spheroid prolate-, dan spheroid oblate-shaped, with polyantoporate aperture, echinate (spine) with blunt, rounded, bifurcated, and grooved apex. Pollen size has positive correlation with the size of flowers. Small single-flowers have the smallest pollen ( $dv = 152,156\ \mu\text{m}$ ,  $dh = 178,312\ \mu\text{m}$ ), and large single-flowers have the largest pollen ( $dv = 174,985\ \mu\text{m}$ ,  $dh = 206,023\ \mu\text{m}$ ). AGAMOUS gene expressed in single-, crested-, and double-flowers.