C204 Morphological comparison of the glandular trichomes in two species of *Pelargonium*

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The capitate trichomes of leaves in *Pelargonium* x *fragrans* 'Mabel Grey' and *Pelargonium peltatum* were investigated with a light microscopy, scanning and transmission electron microscopy. The trichomes consisted of unicellular globular heads and stalks with various length and features were classified into two groups : Type I with a short and cylindrical stalk, and Type II with a long and conical stalk supported by a basal cell. These glandular trichomes have one secretory cell, stalk cells, and one basal cell. Both glands are extreamly abundant in the leaf veins and petioles. During the secretory phase, the ultrastructure of the secretory cells of both trichomes was characterized by a highly developed endoplasmic reticulum(ER), mitochondria and numerous Golgi apparati, and vacuoles involved in storage and transport of lipophilic substances. It seems to be the secretory substance temporally transported in the interfibrillar spaceof the secretory cell wall. and released it through the rupture of the cavity.

C205 Ultrastructure of Glandular Trichomes in *Rosmarinus officinalis* L.

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The capitate glandular trichome of leaves in *Rosmarinus officinalis* L. was examined by a light microscopy, scanning and transmission electron microscopy. The glandular trichomes are consisted of capitate and peltate glands. The former has a short and cylindrical stalk and a single secretory cell, the latter has multicellular globular head cells. Both glands are extreamly abundant in abaxial surface of the leaf veins and petioles. During the secretory phase, the ultrastructure of the secretory cells of both trichomes was characterized by a highly developed endoplasmic reticulum (ER), mitochondria, numerous Golgi apparati, plastids and vacuoles. The vacuoles are involved in storage and transport of lipophilic secretory substances. A large number of plasmodesmata were observed on the wall of secretory cells and stalked cells.