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A major endogenous glycoside hydrolase mediating quercetin uptake in *Bombyx mori*

Ryusei Waizumi, Chikara Hirayama, Shuichiro Tomita, Tetsuya Iizuka, Seigo Kuwazaki, Akiya Jouraku, Takuya Tsubota, Kakeru Yokoi, Kimiko Yamamoto, Hideki Sezutsu

Domestic silkworms under ultraviolet irradiation

The domestic silkworm, *Bombyx mori*, and its wild ancestor, *Bombyx mandarina*, take up quercetin from mulberry leaves and accumulate its glycosides in their tissues. Quercetin glycosides in the hemolymph and silk glands exhibit obvious yellow fluorescence under ultraviolet irradiation. This fluorescence is characteristic of the two major forms of quercetin glycosides observed in the domestic silkworm tissues, quercetin-5-*O*-glucoside and quercetin-5,4'-*di-O*-glucoside. Quercetin glycosides in the mulberry leaves do not exhibit such fluorescence because they are present as a series of glycosides formed by glycosylation at the 3-*O* position.

Image credit: Ryusei Waizumi