

**Specific accumulation of prenylated flavonoid in a tropical tree
Macaranga tanarius grown in Okinawa**

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Propolis is a natural resinous product collected by honeybees from certain plants. It has gained popularity as a food and alternative medicine. However biological activities of propolis largely differ according to the area where it is produced because honeybees choose different plant species depending on the area. Among various lots of propolis, that of Okinawa contains characteristic prenylflavonoids that are not seen in other regions such as Europe and Brazil. These compounds are geranylated eryodictiol derivatives (see structures below). In the previous work of Dr. S. Kumazawa of Shizuoka Prefectural University, the plant origin of okinawan propolis was identified as a tropical tree species, *Macaranga tanarius* (Euphorbiaceae). Honeybees scraped white resinous material from the surface of plant fruits of *Macaranga tanarius* and brought it back to their hive to use it as propolis.

In this study we have found that the resinous materials developed on the surface of *M. tanarius* fruits are glandular trichomes and they are specific tissues, in which prenylated flavonoids are accumulated, as prenylated flavonoids are almost undetectable in the fruits from which the white glandular trichomes are removed.

