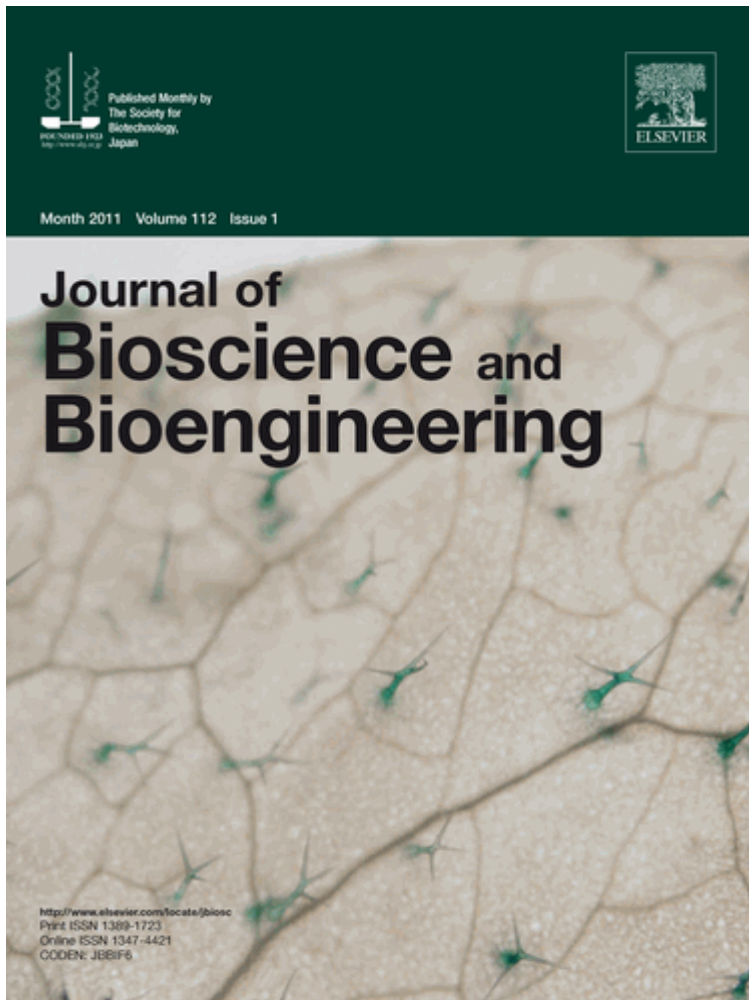


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Plants produce a wide variety of isoprenoid compounds. Sesquiterpenes, triterpenes, and sterols are biosynthesized via the mevalonate (MVA) pathway. The enzyme 3-hydroxy-3-methylglutaryl-CoA reductase (HMGR) catalyzes the first rate-limiting step in the MVA pathway. The model plant *Arabidopsis thaliana* contains two differentially expressed HMGR genes, *HMG1* and *HMG2*. Histochemical GUS staining of transgenic plants carrying promoter::GUS reporter fusions showed that *HMG1* is expressed mainly in veins, but *HMG2* is expressed exclusively in three-branched trichomes (picture) that differentiate from single epidermal cells on the leaves.

The image was provided by **Dr. Hikaru Seki** at Plant Metabolism and Cell Technology Laboratory, Department of Biotechnology, Graduate School of Engineering, Osaka University.

⇒ [JBB Archive](#)