



Mevalonate synthesis enzymes

Description of Technology: This invention is in the field of plant molecular biology. More specifically, this invention pertains to nucleic acid fragments encoding enzymes involved in mevalonate synthesis in plants and seeds.

Patent Listing:

1. **US Patent No. 6,916,972**, Issued July 12, 2005, "Mevalonate synthesis enzymes"
<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F6916972>
2. **US Patent No. 7,217,863**, Issued May 15, 2007, "Mevalonate synthesis enzymes"
<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F7217863>

Market Potential: The terpenoids constitute the largest family of natural products, and play diverse functional roles in plants as hormones, photosynthetic pigments, electron carriers, mediators of polysaccharide assembly, and structural components of membranes. In addition, many specific terpenoid compounds serve in communication and defense. Some terpenoids, available in relatively large amounts, are important renewable resources and provide a range of commercially useful products. Members of the terpenoid group also include industrially useful polymers and a number of pharmaceuticals and agrochemicals.

This invention relates to an isolated nucleic acid fragment encoding a mevalonate synthesis enzyme. The invention also relates to the construction of a chimeric gene encoding all or a portion of the mevalonate synthesis enzyme, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the mevalonate synthesis enzyme in a transformed host cell.

Benefits:

- Improves plant functions

Applications:

- Plant molecular biology
- Agrochemicals
- Pharmaceutical industry

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