

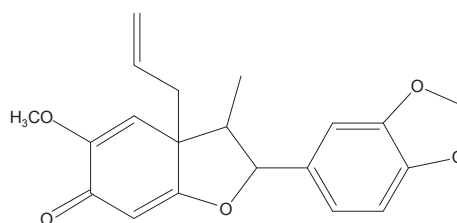
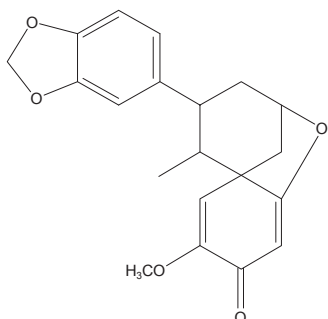
Name of Technology	Ca ²⁺ signal transmission inhibitor obtained from magnolia	Life Science
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Key words	magnolia, Burchellin, Futoenone, Ca ²⁺ signal transmission inhibition, lifestyle-related diseases, allergy	

What kind of technology is this?

Outline

Components in magnolias inhibit Ca²⁺ signal transmission and can be expected to be effective for hypertension, cancer, allergy, type 2 diabetes, Alzheimer's disease, etc.

Using a screening system for the survey of the causes for lifestyle-related diseases, the activity of plant extracts was examined. When the activity was observed, the active component (bioprobe) was isolated and purified, the structure was identified, and the mode of action was studied (chemical biology). In the screening using yeast with a mutated gene involving Ca²⁺ signal transmission ($\Delta zds1$), we identified futoenone (left in the figure below) and burchellin (right in the figure below) from magnolias as Ca²⁺ signal transmission inhibitors and have submitted a patent application for them.



What are its applications?

- ① Development of the functional substances themselves as drugs or as the basis for new drugs
- ② Magnolia processed products based on the property of the functional substances

Related patents	Ca ²⁺ signal transmission inhibitor, Japanese Patent Laid-Open No. 2006-225361
Related materials	Kimura, K, et al. "Plant-derived Ca ²⁺ signal transmission inhibitors screened with yeast." <i>Bioscience and Industry</i> , 64 214-218 (2006). Kimura, K, "Development of naturally occurring organic compounds for functional food and pharmaceuticals." <i>Industrial Chemistry</i> , 58(7), 68-74 (2007).