

Name of Technology	Anti-cancer agent with activating action on PP2C	Life Science
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Key words	<i>sawara</i> cypress, pine, umbrella pine, diterpenoids, PP2C, inhibition of Ca ²⁺ signal transmission, lifestyle-related diseases	

What kind of technology is this?

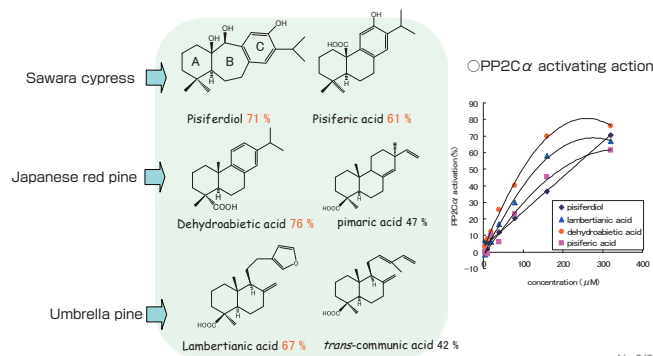
Outline

This is a diterpenoid component derived from sawara cypress, pine and umbrella pine, which can be expected to exhibit anti-cancer activity by activating pp2C.

Using a screening system of PP2C (protein phosphatase 2C), in which no distinctive activators and inhibitors have been detected yet, various naturally occurring organic compounds were examined for their stimulatory or inhibitory activity. As a result, we isolated and purified several compounds from sawara cypress, pine and umbrella pine, which induce apoptosis in human cancer cells by activating PP2C, and submitted a patent application for these compounds which have a novel anti-cancer mechanism.

PP2C activating compounds obtained from plants

○Diterpenoids derived from plants (PP2C α activation % at 320 μ M)



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What are its applications?

- ①Development of the functional substance itself into a new drug, or into the basis for new drugs
- ②Research reagent with PP2C activating action

Related patents	"Anti-cancer agent with PP2C activating action," Japanese Patent Laid-Open No. 2008-214252.
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.