Details of Technology

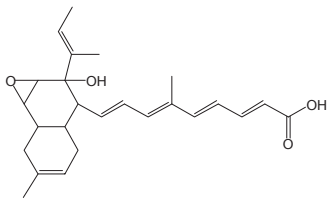
Name of Technology	Anthracobic acids, a novel Ca^{2+} signal transmission inhibitor obtained from an ascomycete	Life Science
Name/Post/Faculty	Ken-ichi Kimura / Associate Professor / Academic Group of Applied Life Sciences, Department of Biological Chemistry and Food Science, Faculty of Agriculture	
Key words	ascomycete, anthracobic acids, inhibition of Ca^{2+} signal transmission, lifestyle-related diseases	

What kind of technology is this?

Outline

An ascomycete produces novel compounds that inhibit Ca^{2+} 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 causes of lifestyle-related diseases, the activity of various naturally occurring organic compounds was examined. When activity was observed, the mode of action was studied (chemical biology). As a result of screening using yeast with a mutated gene involving Ca^{2+} signal transmission(Δ*zdsl*), a novel substance isolated from ascomycete culture medium by Associate Professor Shiono of Yamagata University was found to have an inhibitor compound called anthracobic acid A as a major component (formula shown below). We submitted patent application for this as a Ca^{2+} signal transmission inhibitor.



Anthracobic acid
Patent application No.2006-016864

What are its applications?

Development of the functional substance as the basis of drugs

Related patents	"Anthracobic acids. Application to pharmaceuticals, the isolation method and strains useful for the isolation" Japanese Patent Laid-Open No. 2007-197354
Related materials	Kimura, K. et al. "Plant-derived Ca^{2+} signal transmission inhibitors screened with yeast." *Bioscience and Industry, 64*, 214-218 (2006). Kimura, K. "Development of naturally occurring organic compounds for functional food and pharmaceuticals." *Industrial Chemistry, 58(7)* 68-74 (2007).

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