

Details of Technology

Name of Technology	Search for new seeds of discovery from natural resources and organic synthetic compounds	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	natural resources (foodstuffs, plants and microorganisms), organic synthetic compounds, screening, lifestyle-related diseases, biologically active substance (bioprobe)	

What kind of technology is this?

Outline

We will create new seeds of discovery by subjecting natural resources and organic synthetic compounds to a screening system for the detection of disease-related factors, by separating and purifying the active component, and by examining its structure and mode of action (chemical biology).

Using a screening system for causative factors in lifestyle-related diseases, the activity of various natural resources and organic synthetic compounds is being examined. When relevant activity is observed, the active component (bioprobe) is isolated and purified, the structure is identified, and the mode of action is studied (chemical biology: refer to figure). If the resulting substance is patentable, we will submit a patent application. At the same time, we will develop the active component for pharmaceuticals and food exploiting its property.



What are its applications?

- ① We examine various natural resources for various functional activities, isolate and purify the substance exhibiting such activity from the resource, elucidate its activity, and develop it as the basis for drugs or health promoting food.
- ② We examine the activity of organic synthetic compounds whose biological action is unknown in an assay system for the detection of various disease-related factors and develop the active compound as the basis of new drugs.

Related patents	
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).