

# **Advanced Technology in Functional Food and Dietary Supplement -AIST challenges to identify active substances in natural products-**

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## **Abstract**

Functional food and dietary supplement should be based on molecular mechanisms of a physiological system in the living body. Especially, it is important to keep or strengthen the immune system. It is also important to not show the toxicity in body. One of our mission in Biomedical Research Institute (BRI) of AIST is the development of fundamental screening technologies of new functional compounds for drugs or dietary supplements. In this seminar, I introduce the challenge of AIST for screening and identifying the active substances from the natural products as follows; 1) Functional analysis of foods using human nuclear-receptor reporter assay, 2) Functional analysis of foods and toxicity using multicolor reporter assay, 3) Functional analysis of foods using a flow cytometry, 4) Isolation of functional compounds using animal model, 5) Development of model mice systems and functional analysis of food. Finally, AIST is a leading public institute for contributing to life and green innovation as a bridging function. We welcome to transfer our technique to your company and institutes.

**Keywords:** Animal model, Dietary supplement; Functional food; Reporter assay; Screening technology;