

Annual Congress on

# Mycology and Fungal Infections

November 16-17, 2017 Atlanta, Georgia, USA

## Variation of anti-fungal saponin concentration in *Apostichopus japonicus*

**Akira Yano**

Iwate Biotechnology Research Center, Japan

*Apostichopus japonicus* is an edible sea cucumber inhabits the coastal waters of Japan. The sea cucumber has been eaten over thousands of years. In China, dried sea cucumbers are expensive but popular medicinal foods. In Japan, slice of raw sea cucumber is usually eaten with soy sauce and vinegar. Japanese researcher, Dr. Shigetoshi Shimada, found the anti-fungal saponin, holotoxins, from *A. japonicus* in 1969. He developed the drug for athlete's foot by sea cucumber extract. Recently, we tried to use *A. japonicus* as a functional food for oral care of elderly, and reported the *A. japonicus* jelly could reduce the oral Candida of elderly in the care-house<sup>1</sup>. *A. japonicus* processed foods will be valuable for prevention of oral candidiasis. However, we found the large individual differences of saponin concentration of sea cucumbers. It is necessary for establishment of the system for quality control of *A. japonicus* functional foods. First of all we surveyed the saponin of *A. japonicus* at the various places. We also analyzed saponins of *A. japonicus* at the same place throughout a year. We revealed that *A. japonicus* from the northern part of Japan tended to be higher concentration of saponins, and saponin contents were markedly decreased in Apr., Aug. and Nov. It has to select the proper districts and season of *A. japonicus* for producing anti-fungal functional foods. It was also described as *Stichopus japonicus*.

### Biography

Akira Yano has completed his PhD from University of Tokyo and postdoctoral studies from National Institute of Advanced Industrial Science and Technology. Then he worked at the National Institute of Infectious Diseases and National Institute of Public Health as Government Researcher. In 2006, he moved in Iwate Biotechnology Research Center, and became the Manager of the Department of Bioresource Sciences in 2015. He has studied on local bioresources, especially of functional foods for healthy life.

akiray@ibrc.or.jp

**Notes:**