2015 CFAI 7th Special Lecture

Modulation of respiratory immune response by beneficial bacteria: impact on the prevention of viral respiratory infections

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Time : 13:00 – 14:30
Venue : Lecture room No. 10

(Graduate School of Agricultural Science)

Respiratory viruses are the most important cause of severe mucosal infections worldwide especially in high risk populations such as in infants, elderly and immunocompromised hosts. A significant improvement in the knowledge of how the host immune response contributes to the pathogenesis of viral infections has been made during the last decade. This understanding of host response and molecular pathogenesis of viral infections has been critical for the development of vaccines, antivirals and other disease intervention approaches such as probiotic functional foods. Lactic acid bacteria (LAB) are technologically and commercially important and have various beneficial effects on human health. Several studies demonstrated that certain LAB strains can exert their beneficial effect on the host through their immunomudulatory activity. These strains, termed immunobiotics, have been used for the development of probiotic foods with the ability to stimulate mucosal antiviral immunity. In this special lecture we will examine the current scientific advances in our understanding of how commensal microorganisms are able to modulate respiratory viral immunity and affect the outcome of viral diseases. We will also analyze the results from the *Immunobiotic Research Group* that demonstrated the potential of immunobiotic LAB as a promising resource for the development of prevention strategies against viral infections that could be effective tools for medical application.

(This lecture is included in Class 2(2) of International Food & Agricultural Immunology Lecture, 2015 and is also highly recommended for Master course students)