**2016 KAI-IBS Joint International Conference**

**Abstract Submission Guideline**

**\*** English is the official language.

* Title: Each word should be started with a capital letter.
* Presenting Author **&** Co-Author: Use comma (,) between co-authors.
* Underline for Presenting Author and asterisk (\*) for Corresponding Author\*.
* Name: Put First Name Middle Name Last Name. Please follow the order.
* Affiliation: Use superscripted number (UCLA**1**) if there are more one name and affiliation.
* Body**:** Font 10. Less than 2,000 words. No more than 1 page.
* Key words: less than 5 words. Each word should begin with a capital letter.

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| <Example> **Glutamine and Leucine Provide Enhanced Protective Immunity Against Mucosal Infection with Herpes Simplex Virus Type 1** Erdenebileg Uyangaa1, Hern-Ku Lee2 and Seong Kug Eo1\* 1College of Veterinary Medicine and Bio-Safety Research Institute, Chonbuk National University, 2Department of Immunology, Chonbuk National University Medical School, Jeonju 561-756, Korea Besides their role as building blocks of protein, there are growing evidences that some amino acids have roles in regulating key metabolic pathways that are necessary for maintenance, growth, reproduction, and immunity. Here, we evaluated the modulatory functions of several amino acids in protective immunity against mucosal infection of herpes simplex virus type 1 (HSV-1). We found that glutamine (Gln) and leucine (Leu) showed enhanced protective immunity to HSV-1 mucosal infection when two administration of Gln and single administration of Leu per day, but not when administered in combinations. Ameliorated clinical signs of HSV-1 challenged mice by the intraperitoneal administration of Gln and Leu were closely associated with viral burden and IFN-Ճ production in the vaginal tract at 2 and 4 days post-infection. In addition, the enhanced production of vaginal IFN-Ճ appeared to be caused by NK and HSV-1 antigen-specific Th1-type CD4+ T cells recruited into vaginal tract of mice treated with Gln and Leu, which indicates that IFN-Ճ, produced by NK and Th1-type CD4+ T cells, may be critical to control the outcome of diseases caused by HSV-1 mucosal infection. Collectively, our results indicate that intraperitoneal administration of Gln and Leu following HSV-1 mucosal infection could provide beneficial effects for the modulation of protective immunity, but dosage and frequency of administration should be carefully considered, because higher frequency and overdose of Gln and Leu, or their combined treatment, showed detrimental effects to protective immunity. Keyword : Glutamine, Leucine, Mucosal infection, Herpes simplex virus, Protective immunity  |