

Immunobiotic-host interactions in the post-genomic era: perspectives and applications in the improvement of antiviral immunity in humans and animals

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Julio Villena is a CONICET Researcher working in the Laboratory of Immunobiotechnology of the Reference Center for Lactobacilli (CERELA-CONICET) in Tucuman, Argentina. Dr. Villena is biochemist from the Faculty of Biochemistry, Chemistry and Pharmacy, University of Tucuman and Doctor in Biochemistry (Immunology-Microbiology) of the University of Tucuman. He was awarded a Postdoctoral Fellowship for Foreign Researchers from the Japan Society for the Promotion of Science (JSPS) to work in the Food and Feed Immunology Group Graduate School of Agricultural Science- Tohoku University in Sendai, Japan. He works in collaboration with researchers of Tohoku University since then. He has also participated several times as invited professor to give special lectures in the Center for Food and Agricultural Immunology (CFAI). His research activities are focused on the study of the **cellular and molecular interactions of immunobiotics with the host and the effects of those interactions on the resistance against viral infections in humans and animals**. The complex interactions of beneficial and pathogenic microorganisms are studied in the respiratory and the intestinal mucosa with special focus in pattern recognition receptors and their signaling pathways. Dr. Villena applies modern genetic and genomic tools to gain insight into the mechanisms of action of immunobiotics. His research has given the scientific basis for the development of functional foods and feeds using immunomodulatory probiotics. His more recent research projects are dedicated to the study of the effect of immunobiotics to improve immune health in immunocompromised hosts and their impact on the resistance against intestinal and respiratory viral infections.