

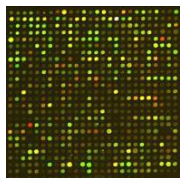
PRESS RELEASE



Probiotics Research Focuses on Immunity

New studies presented by Institut Rosell-Lallemand during the 5th Probiotics, Prebiotics & New Foods Meeting in Rome advocate the role of probiotics in the prevention of infectious diseases

Montreal, Canada, September 22nd, 2009 – During the 5th Probiotics, Prebiotics & New Foods Meeting held last week in Rome, Italy, Institut Rosell-Lallemand unveiled recent clinical and *in vitro* research focused on the interactions of probiotic preparations with the immune response. On the day emphasizing pediatrics, Dr Henri Durand presented the double-blind randomized, controlled, multicentre study carried out with children using ProbioKid[®] synbiotic formula. Conducted in France, the study showed ProbioKid[®]'s ability to reduce the incidence of infectious episodes in school-aged children during the winter period. *



Moreover, two *in vitro* studies carried out in partnership with the Microarray Laboratory at the Biotechnology Research Institute in Montreal, Canada, were also addressed **. These presentations described the development of an immune microarray specially designed to study the effect of probiotic bacteria-human cells interactions upon the expression of genes involved in the immune response (1,354 genes in total). The new technological platform was used to examine the effects of certain probiotic formulas upon immune gene expression by intestinal epithelial cells and immune cells (macrophages). It was applied to the ProbioKid[®] formula, as well as to each individual strain and ingredient present in the formula and to a single strain probiotic formulation — *L. Plantarum* 299v. As a result, it was concluded that both products i) had an impact on gene expression by intestinal endothelial cells and macrophages ii) and they triggered distinct gene response profiles in both cell types.

Interestingly, it appeared that ProbioKid[®], which was proven effective in the clinical trial, was able to modulate the expression of several genes involved in immunity. In particular, the expression of IL-8, an inflammatory marker, was down-regulated by the beneficial microbes present in ProbioKid[®].

According to Dr Julie Audy, who presented the project, *"the immune microarray that we developed is unique in the sense that it is specific to immunity - we selected 1,354 genes associated with various enzymatic cascades involved in immunity- and with cross-cell communication (human cells-human cells, but also human cells-bacteria). It will serve as an excellent tool to compare the impact of various probiotic compositions upon immune response and to better understand their action mechanisms in the host, especially when co-challenged with pathogenic bacteria."*

"During these three days in Rome," added Isabelle Champié, Human Nutrition Brand Manager for Institut Rosell-Lallemand, *"we saw that the potential for probiotics is broadening, with studies in various areas such as winter infections, atopy and metabolic syndromes. Finally, the main conclusions that arose from the meeting is that we need well conducted clinical studies, supported by good mechanistic studies to help us understand their modes of action. That is why we believe that the scientific program on ProbioKid and the immune microarray project fall perfectly within this scope."*

For more information about ProbioKid[®], contact human@institut-rosell.com, or visit www.institut-rosell-lallemand.com.

For more information about the 5th Probiotics, Prebiotics & New Foods Meeting, visit www.probiotics-prebiotics-newfood.org.

* *Evaluation of the Effects of a Symbiotic Supplement on the Incidence of Infectious Episodes In Children: Randomized, Controlled, Multicentre Study.* Pham-Thi, Nhat, Durand, Henri, Kerihuel, Jean-Charles, Bohbot, Serge.

** *A Custom Human Immune Microarray to Evaluate the In Vitro Response of Enterocyte and Macrophage Cells to Bacteria.* Audy, Julie, Mathieu, Olivier, MacPherson, Chad, Nantel, André, Tompkins, Thomas Allan (Poster).

A Comparison of the Impact of Mono-Strain and Multi-Strain Probiotics on Human Enterocytes and Macrophages Using an Immune Microarray. Audy, Julie, Mathieu, Olivier, MacPherson, Chad, Nantel, André, Tompkins, Thomas Allan (Poster).

About Lallemand and Institut Rosell

Lallemand Inc. is a privately owned Canadian company specialized in the development, production and marketing of yeast and bacteria, as well as other ingredients linked to these microorganisms or their markets. Institut Rosell has been part of the Lallemand Group since 1998. Today, it constitutes Lallemand's Human Health and Nutrition Division and is dedicated to the selection, development, production and marketing of probiotic formulations for the food and pharmaceutical industries. With extensive experience in the culturing and production of live microorganisms since 1932, Institut Rosell conducts advanced research programs aimed at better understanding the properties, functions and beneficial effects of these probiotic formulations on health. For more information, please visit www.institut-rosell-lallemand.com, or contact human@lallemand.com.

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