

Product News

Lonza Awarded Patent for Ability of Larch Arabinogalactan to Enhance the Adaptive Immune Response

Allendale, NJ, 1 October 2014 – Lonza today announced it has been awarded a new patent for the ability of its ResistAid® larch arabinogalactan, when administered with a vaccine, to enhance the adaptive immune response. The patent, No. US 8,784,844 B2, entails arabinogalactan's ability to elicit a beneficial response from the adaptive immune system when administered with a vaccine in subjects prior, during and after the phase of exposure to a foreign antigen.

"This new patent further validates the role of ResistAid® larch arabinogalactan as an immune modulation ingredient, thanks to a wealth of validated science demonstrating its ability to selectively call upon both the non-specific, cellular response, as well as the adaptive immune response in healthy adults," said Bryan Rodriguez, Global Product Manager for Lonza. "In addition, the ResistAid® ingredient provides an immunomodulatory effect, meaning it can enhance the appropriate response to an antigen, as opposed to indiscriminately enhancing other arms of the immune system that would not be expected to respond."

The patent was awarded as a result of continued clinical research investigating the ability of ResistAid® larch arabinogalactan to modulate the immune system in direct response to antigenic stimulation, rather than nonspecific augmentation, for a more physiologic approach to immune enhancement. Specifically, ResistAid® larch arabinogalactan demonstrated the ability to increase the antibody response of healthy volunteers to the 23-valent pneumococcal (pneumonia) and tetanus vaccine. These studies were conducted in collaboration with Medicus Research LLC and were published in the *Nutrition Journal* and *Journal of the American College of Nutrition*.

"These randomized, double-blind, placebo-controlled trials demonstrated the ability of the ResistAid® ingredient at a dose of 1.5 g/day to significantly increase the IgG antibody response to the tetanus and pneumococcal vaccine, as compared with a placebo," Rodriguez said. "In conjunction with earlier studies, this validates the effect of ResistAid® arabinogalactan on the augmentation of the response to bacterial antigens in the form of a vaccine."

Vaccines trigger *in vivo* immune responses, which are indicators of immune function. The vaccine model is widely used to evaluate the impact a nutrient has on normal immune function and provides high-quality information on the protective effect a nutrient has on *in vivo* immune responsiveness.

The ResistAid® ingredient is composed of galactose and arabinose, which have the ability to strengthen both the innate and adaptive arms of the immune system. Galactose and arabinose are common structural components of cell walls of environmental invaders such as bacteria. Therefore, the immune cells directly recognize the components and bind to ResistAid® larch arabinogalactan. ResistAid® ingredient acts as a biological response modifier, via receptor sites on immune cells.

Product News

About ResistAid

ResistAid® larch arabinogalactan is a proprietary natural immune support ingredient. It is produced via a patented water-based extraction process (US 5756098, EP 866808 and other patents) from larch trees that grow in abundance in the United States. The ResistAid® ingredient consists of the soluble fiber arabinogalactan and bioactive flavonoids, and thus has antioxidant capacity.

About Lonza

Lonza is one of the world's leading and most-trusted suppliers to the pharmaceutical, biotech and specialty ingredients markets. We harness science and technology to create products that support safer and healthier living and that enhance the overall quality of life.

Not only are we a custom manufacturer and developer, Lonza also offers services and products ranging from active pharmaceutical ingredients and stem-cell therapies to drinking water sanitizers, from the vitamin B compounds and organic personal care ingredients to agricultural products, and from industrial preservatives to microbial control solutions that combat dangerous viruses, bacteria and other pathogens.

Founded in 1897 in the Swiss Alps, Lonza today is a well-respected global company with more than 40 major manufacturing and R&D facilities and approximately 10,000 employees worldwide. The company generated sales of about CHF 3.6 billion in 2013 and is organized into two market-focused segments: Pharma&Biotech and Specialty Ingredients. Further information can be found at www.lonza.com.

Contact Information:

Lonza Inc.

Global Product Manager
Bryan Rodriguez
Tel +1 612 810 3190
bryan.rodriquez@lonza.com

Lonza Group Ltd.

Head External Relations
Constance Ward
Tel +41 61 316 8840
constance.ward@lonza.com

Additional Information and Disclaimer

Lonza Group Ltd is headquartered in Basel, Switzerland, and is listed on the SIX Swiss Exchange and secondary listed on the Singapore Exchange Securities Trading Limited ("SGX-ST"). Lonza Group Ltd is not subject to the SGX-ST's continuing listing requirements. Lonza Group Ltd is subject to the listing rules of the SIX Swiss Exchange, which does not have specific requirements equivalent to the listing rules of the SGX-ST for interested person transactions, acquisition and realizations and delisting.

Certain matters discussed in this news release may constitute forward-looking statements. These statements are based on current expectations and estimates of Lonza Group Ltd, although Lonza Group Ltd can give no assurance that these expectations and estimates will be achieved. Investors are cautioned that all forward-looking statements involve risks and uncertainty and are qualified in their entirety. The actual results may differ materially in the future from the forward-looking statements included in this news release due to various factors. Furthermore, except as otherwise required by law, Lonza Group Ltd disclaims any intention or obligation to update the statements contained in this news release.