

Press Release

New Study Identifies the Ability of ResistAid™ to Enhance Immune Response at Lower Dosage

Basel, Switzerland, 13. November 2013 – New research demonstrates the ability of ResistAid™, Lonza's proprietary, arabinogalactan-based immune support ingredient, to increase the antibody response in healthy adults after exposure to the Tetanus vaccine. Conducted at a dosage of 1.5 g/day, the study finds the efficacy of ResistAid™ at a significantly lower dosage, as compared to the 4.5 g/day that was previously found to be effective. The findings were recently published in the October issue of *Journal of the American College of Nutrition*, and can be found here: <http://www.tandfonline.com/doi/full/10.1080/07315724.2013.839907> .

"This study further validates the capability of ResistAid™ to influence an expected and beneficial response from the immune system, while simultaneously confirming its ability to do so at a low dosage," said Michael DeGennaro, NAFTA VP Sales Human Nutrition - Lonza Inc. "In combination with its positive effects on both the innate and adaptive arms of the immune system, ResistAid™ is highly formulation-friendly. It can be easily incorporated into dietary supplements and functional foods in standalone form, or combined with other products to increase functionality."

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.

"This randomized, double-blind, placebo controlled trial demonstrated the ability of ResistAid™ at a dose of 1.5 g/day to significantly increase the IgG antibody response to the Tetanus vaccine, as compared to a placebo," said Bryan Rodriguez, Global Product Manager, Arabinogalactan at Lonza. "In conjunction with earlier studies, this validates the effect of ResistAid™ on the augmentation of the response to bacterial antigens in the form of a vaccine."

Subjects included 75 healthy adults (18-61 years old) who were randomized to receive either 1.5 g/day or 4.5 g/day of ResistAid™ or placebo for 60 days. At day 30, subjects were administered both Tetanus and Influenza vaccines. Serum antigenic response (Tetanus IgG, Influenza A and B IgG and IgM) were measured at days 45 (15 days after vaccination) and 60 (30 days after vaccination) of the study and compared to baseline antibody levels. As expected, all three groups demonstrated a rise in Tetanus IgG levels 15 and 30 days following the vaccine. There was a significant difference in the rise in Tetanus IgG levels at day 60 in the 1.5 g/day group compared to placebo ($p = 0.008$). Neither group demonstrated any significant elevations in IgM or IgG antibodies compared to placebo following the Influenza vaccine.

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ResistAid™ is a proprietary natural immune support ingredient made from larch trees. ResistAid™ consists of the soluble polysaccharide arabinogalactan and bioactive polyphenolic flavonoids, and thus has antioxidant capacity. ResistAid™ is formulated to deliver triple action immune benefits year round by supporting both the innate and adaptive immune responses as well as gastrointestinal health. Benefiting from a patented, water-based extraction process from U.S. larch trees, ResistAid™ is manufactured according to HACCP. It is GMP-audited by the American Institute of Baking, is Kosher certified by the United Mehadrin, GMO free and self-affirmed GRAS.

About Lonza

Lonza is one of the world's leading suppliers to the pharmaceutical, healthcare and life science industries. Products and services span its customers' needs from research to final product manufacture. It is the global leader in the production and support of chemical and biological active pharmaceutical ingredients. Biopharmaceuticals are one of the key growth drivers of the pharmaceutical and biotechnology industries. Lonza has strong capabilities in large and small molecules, peptides, amino acids and niche bioproducts, which play an important role in the development of novel medicines and healthcare products. Lonza is also the world leader in microbial control providing innovative, chemistry-based and related solutions to destroy or to selectively inhibit the growth of harmful microorganisms. Its activities encompass the areas of water treatment, personal care, health and hygiene, industrial preservation, materials protection, and wood treatment. In addition, Lonza is a leader in cell-based research, endotoxin detection and cell therapy manufacturing. Furthermore, the company is a leading provider of value chemical and biotech ingredients to the nutrition and agro markets.

Lonza 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 is not subject to the SGX-ST's continuing listing requirements. Lonza is subject to the listing rules of the SIX Swiss Exchange, which do not have specific requirements equivalent to the listing rules of the SGX-ST in respect of interested person transactions, acquisition and realizations, and delisting. In 2012, the company had sales of CHF 3.925 billion. Further information can be found at www.lonza.com and www.resistaid.com.

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