



First Demonstration of nanolmmunology: a Nanomaterials-based Therapeutic Approach to Treat Allergy

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Luna Innovations and Virginia Commonwealth University Study Published in Journal of Immunology

ROANOKE, Va., Jun 20, 2007 (BUSINESS WIRE) -- Researchers from Luna Innovations Incorporated (NASDAQ: LUNA) and [Virginia Commonwealth University](#) (VCU) are the first to show that carbon nanospheres, sometimes referred to as "buckyballs," are able to block allergic response in human cell culture experiments and mice. These findings are described in a paper entitled "Fullerene Nanomaterials Inhibit the Allergic Response" published in the July 1 issue of the [Journal of Immunology](#), setting the stage for the development of new potential therapies for allergies using nanomaterials.

Kent Murphy, CEO, Luna Innovations, noted about the immunology discovery and publication, "Luna's collaborations with universities and strategic partners are key to our business model and we are delighted to be part of this dynamic program to discover a new frontier in medicine. We are actively seeking pharmaceutical partnerships to help us accelerate the development and validation process of these new and exciting compounds."

Allergy is the fifth leading chronic disease in the United States among all ages, and the third most common chronic disease among children under 18 years old, according to the Asthma and Allergy Foundation of America. An estimated 50 million Americans (one in five) suffer from some type of allergy. There are currently various treatments to control allergies, but no known cure. "The immune system both protects us and causes harm, so we are always interested in finding new pathways to help manage the harmful effects," said Chris Kepley, Ph.D., principal author on the paper and assistant professor in the Department of Internal Medicine, Division of Rheumatology, Allergy and Immunology at the VCU School of Medicine. "This discovery is exciting because it points to the possibility that these novel materials can one day lead to new therapies," said Kepley.

Buckyballs, or fullerenes, are named after American architect R. Buckminster Fuller renowned for his designs based on geodesic domes. Researchers at Luna Innovations have discovered and demonstrated that therapeutic applications for fullerenes may be much more practical than previously thought or reported.

"Through this joint collaboration with VCU, we demonstrated the ability to modulate the immune response with nanoscale precision," said Dr. Robert Lenk, President of Luna Innovations' nanoWorks Division and co-author of the paper. "Our experiments could be the beginning of an entirely new field of medicine we are calling nanolmmunology. We are excited about the potential possibilities in immunotherapeutics and other medical disorders that may be possible with these compounds."

The new study's findings are published in Volume 179 / No. 1 / July 1, 2007 issue of the [Journal of Immunology](#). This research was supported in part by grants from the National Institutes of Health and the Food Allergy and Anaphylaxis Network. A copy of the study is available to reporters in PDF format by email request from the American Association of Immunologists at info@aaai.org.

About Luna Innovations Incorporated:

Luna Innovations Incorporated develops and manufactures new-generation products for the healthcare, telecommunications, energy and defense markets. The company's products are used to measure, monitor, protect and improve critical processes in the markets it serves. Through its disciplined commercialization business model, Luna has become a recognized leader in transitioning science to solutions. Luna Innovations is headquartered in Roanoke, Virginia. Luna nanoWorks, a division of Luna Innovations, is located in Danville, Virginia. For more, see www.lunainnovations.com.

About VCU and the VCU Medical Center: Virginia Commonwealth University is the largest university in Virginia and ranks among the top 100 universities in the country in sponsored research. Located on two downtown campuses in Richmond, VCU enrolls more than 30,000 students in nearly 200 certificate and degree programs in the arts, sciences and humanities. Sixty-three of the programs are unique in Virginia, many of them crossing the disciplines of VCU's 15 schools and one college. MCV Hospitals and the health sciences schools of Virginia Commonwealth University compose the VCU Medical Center, one of the nation's leading academic medical centers. For more, see www.vcu.edu.

Forward Looking Statements:

This release includes information that constitutes "forward-looking statements" made pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995, including statements that recent experiments involving carbon nanospheres could be the beginning of an entirely new field of medicine and statements regarding possibilities in immunotherapeutics and other medical disorders that may be possible with nanomaterial



*Researchers at Luna and VCU
develop buckyballs to fight allergy
See VCU release [here](#)*

compounds. Actual results may differ materially from the expectations expressed in such forward-looking statements as a result of various factors, including risks and uncertainties set forth in the company's periodic reports and other filings with the Securities and Exchange Commission. Such filings are available at the SEC's website at <http://www.sec.gov>, and at the company's website at <http://www.lunainnovations.com>. The statements made in this release are based on information available to the company as of the date of this release and Luna Innovations undertakes no obligation to update any of the forward-looking statements after the date of this release.

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