



FOR IMMEDIATE RELEASE

Nucleonics Initiates Hepatitis B Clinical Trial with Expressed Interfering RNA Therapeutic

First Patient Treated with Systemically Delivered Gene Silencing Therapeutic Designed to Reduce Both Viral Titer and Destructive HBV Antigen Load

HORSHAM, PA (January 11, 2008): Nucleonics, Inc., a privately held biotechnology company focused on the development of novel RNA interference (RNAi)-based therapeutics, announced today that the company has begun treating patients in a Phase 1 human safety study of its experimental treatment for chronic Hepatitis B virus (HBV) infection, NUC B1000.

NUC B1000 (<http://www.nucleonicsinc.com/products/hepb.html>) is an expressed interfering RNA (eiRNA)-based product consisting of a plasmid DNA construct designed to produce four short interfering RNA (siRNA) molecules, formulated with a proprietary cationic-lipid delivery system. Each of the four siRNAs targets a different sequence of the HBV genome, collectively leading to the potential destruction or elimination of all RNA species produced by HBV within an infected cell. The result is a potent antiviral effect designed for efficacy against all HBV genotypes, including drug resistant strains. Additionally, unlike currently available HBV therapeutics, NUCB1000 is designed to specifically reduce viral antigen load in addition to viral titer, thereby reducing the destructive effects of hepatitis and increasing the potential for resolution of viral infection.

“Despite the widespread availability of multiple prophylactic vaccines against HBV, chronic HBV infection remains a public health problem around the world that can lead to such serious diseases as cirrhosis, fibrosis and liver cancer in up to one-third of patients,” said Principal Investigator, Robert G. Gish, M.D, Medical Director, Liver Transplant Program and Chief, Division of Hepatology and Complex GI, California Pacific Medical Center, San Francisco. “Current anti-HBV drug therapies are of limited effectiveness and are not often used in patients with mild to moderate disease due to risks of developing drug resistance. Thus there is significant need for new treatments that can improve patient response rates to therapy and prevent the emerging drug resistance associated with the use of conventional antiviral therapeutics, enabling more patients to benefit from treatment.”

Nucleonics plans to enroll a total of 15 patients infected with HBV with mild to moderate disease and no evidence of cirrhosis at three U.S. clinical sites and two sites in Eastern Europe. The patients are being organized into five escalating dose groups of three patients per group. Primary endpoints are safety-related, with secondary endpoints tracking biological markers of efficacy, including HBV viral levels in the blood and circulating HBV surface antigen (HBsAg) levels. An independent safety monitor as well as a data safety monitoring board (DSMB) will oversee the trial. There is a planned stop and interim safety analysis after completion of the third dose group before proceeding to the fourth and fifth cohorts.

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"We are very pleased to initiate this clinical study, which represents one of the first systemic administrations of any RNAi-based therapeutic and is the first RNAi treatment directed against HBV," said Robert Towarnicki, President and Chief Executive Officer of Nucleonics, Inc. "We believe Nucleonics' eiRNA approach offers several major advantages over other RNAi approaches. Each eiRNA molecule entering the nucleus of a targeted cell produces thousands of copies of siRNA, and allows for a sustained therapeutic response versus the repeat administration expected to be required for synthetically created RNAi drugs. Moreover, one eiRNA drug molecule has the potential to encode four or more different siRNAs, enabling the attack of multiple targets using a single therapeutic, thereby decreasing the chances of developing drug resistance. Moreover, plasmid DNA is non-immunogenic and a stable drug format that benefits from well-characterized manufacturing methods, storage techniques, regulatory requirements and the likelihood of a favorable safety profile based on earlier DNA vaccine clinical trials."

For additional information about clinical studies with NUC B1000, please visit our web site at <http://www.nucleonicsinc.com/clinical/index.html>. If you have further questions, please email clinicaltrials@nucleonicsinc.com

About Nucleonics, Inc.

Nucleonics, founded in January 2001, is an emerging biotechnology company focused on the development of novel RNA interference-based therapeutics for viral and other diseases. Privately owned, Nucleonics is headquartered in Horsham, Pennsylvania. For more information on the company, please visit the Nucleonics website at <http://www.nucleonicsinc.com>.

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Contacts:

Robert Towarnicki, CEO
Nucleonics, Inc.
(267) 518-0101
rtowarnicki@nucleonicsinc.com

For Media:

Joan Kureczka
Kureczka/Martin Associates
(415) 821 2413
Jkureczka@comcast.net