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PAPER REVEALS POTENTIAL NEW TREATMENT FOR OVARIAN CANCER

Wynnewood, PA, February 9, 2009 - - - - - Ovarian cancer is the fourth most common cancer in women and has the highest mortality rate for gynecologic cancers because it is often diagnosed at an advanced stage. New effective therapies for the treatment of advanced stage ovarian cancer are urgently needed.

Today, a paper published in the Proceedings of the National Academy of Sciences (PNAS) by Dr. Janet Sawicki, Professor at the Lankenau Institute for Medical Research (LIMR), a team headed by Daniel G. Anderson, Ph.D. and Robert Langer, Sc.D. of the David H. Koch Institute for Integrative Cancer Research at the Massachusetts Institute of Technology (MIT) and David Bumcrot, Director of Research at Alnylam Pharmaceuticals, shows that a new therapy suppresses ovarian tumor growth and metastasis in preclinical studies.

Ovarian tumors highly express two proteins, claudin-3 and -4. These proteins are associated with both an increase is cellular motility and survival of ovarian tumor cells. Claudin-3 is also over expressed in breast and prostate tumors. This new therapy is targeting claudin-3 (CLDN3) using small interfering RNA (siRNA). More specifically, this team has developed a nanoparticulate, lipid-like delivery system for intraperitoneal delivery of siRNA to ovarian tumors. Tests of the therapeutic efficacy of CLDN3 siRNA in three different mouse models showed a significant reduction in tumor growth. Additionally, these mice showed no ill side effects of the CLDN3 siRNA treatment.

"We are excited by the preclinical performance of these formulations, and are hopeful that the lipidoid-siRNA nanoparticulates developed here may enable new genetic therapies for ovarian cancer," said Anderson.

"These findings offer new hope for a therapeutic treatment option for individuals with metastatic ovarian cancer and potentially other types of cancers that over-express CLDN3", states Dr. Janet Sawicki. " Our next step is to begin Phase I clinical trials to test for safety with hopes to bring this treatment to the patient in the next few years."

This research was made possible through funding from the National Institutes of Health (NIH), the Sandy Rollman Ovarian Cancer Foundation of Havertown, PA, and Wawa.

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Lankenau Institute for Medical Research

Founded in 1927, the Lankenau Institute for Medical Research (LIMR) is an independent, nonprofit biomedical research center located in suburban Philadelphia on the campus of the Lankenau Hospital. As part of the Main Line Health System, LIMR is one of the few freestanding, hospital-associated medical research centers in the nation. The faculty and staff at the Institute are dedicated to advancing an understanding of the causes of cancer and heart disease. They use this information to help improve diagnosis and treatment of these diseases as well as find ways to prevent them. They are also committed to extending the boundaries of human health and well-being through technology transfer and education directed at the scientific, clinical, business and lay public communities. For more information visit: www.limr.org.

David H. Koch Institute for Integrative Cancer Research at MIT

Launched by MIT in 2008, the David H. Koch Institute for Integrative Cancer Research (KI) both transforms and transcends the Center for Cancer Research (CCR). CCR was founded in 1974 by Nobel Laureate and MIT Professor Salvador Luria, CCR has made enormous contributions to the field of cancer research. The Koch is one of only seven National Cancer Institute-designated basic research centers in the US and is comprised of faculty that have earned the most prestigious national and international science honors including the Nobel Prize and the National Medal of Science. For more information visit: web.mit.edu/ki/index.html.

Alnylam Pharmaceuticals, Inc.

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