



Immediate Release

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**Christiana Care Health System's Gene Editing Institute Awarded
Grant from BIRD Foundation for Genomic Cancer Research**

*Partnership with NovellusDx for research in the development of
new gene editing technologies that can lead to personalized cancer therapies*

Wilmington, Del, Jan. 30, 2017 – For its enormous potential to accelerate the development of personalized cancer therapies, the [Gene Editing Institute of Christiana Care Health System's Helen F. Graham Cancer Center & Research Institute](#) has been awarded a grant of \$900,000 from the U.S.-Israel Binational Industrial Research and Development (BIRD) Foundation in partnership with the biotechnology company [NovellusDx](#).

The BIRD Foundation promotes collaboration between U.S. and Israeli companies in a wide range of technology fields for the purpose of joint product development. Projects submitted to the BIRD Foundation undergo evaluation by the U.S. National Institute of Standards and Technology of the U.S. Department of Commerce and by the Israel Innovation Authority.

The grant allows the Gene Editing Institute to partner with Jerusalem-based NovellusDx on a new series of state-of-the-art gene editing technologies that help identify the genetic mechanism responsible for both the onset and progression of many types of cancer. The two organizations are collaborating on a licensing agreement to commercialize the gene editing technologies that result from the research.

“Thanks to this generous BIRD Foundation grant, this partnership promises to be a catalyst that will speed progress in personalized medicine for many forms of cancer, accelerating the path to prevention, diagnosis, treatment, and ultimately, to a cure of cancer,” said Nicholas J. Petrelli, M.D., the Bank of America endowed medical director of the [Helen F. Graham Cancer Center & Research Institute at Christiana Care Health System](#).

“We are honored to partner with the exceptional team at NovellusDx to advance genomic cancer research and to discover new gene editing techniques,” said [Eric Kmiec, Ph.D.](#), director of the Gene Editing Institute. “Our partnership is not only based on the skills of both organizations, but on the unique opportunity to license our gene editing technology with a company capable of commercializing it. The due diligence and peer review process for this award are extensive. I’m

enormously grateful to the Research Institute at the Philadelphia-Israeli Chamber of Commerce for its invaluable support of our application.”

NovellusDx has established a unique approach to identify unknown “driver” gene mutations that often accelerate or facilitate cancer progression. With clinical partners throughout the world, including at MD Anderson Cancer Center and Massachusetts General Hospital in the U.S., NovellusDx obtains DNA sequence information and creates a personal profile of the genetic mutations from individual patients. The Gene Editing Institute will use its expertise in gene editing to re-create these mutations that allows NovellusDx and its partners to identify, design and implement the most effective therapy for each patient.

Cancer genomics plays a critical role in pharmacogenomics, or the study of how genes impact a patient’s response to drugs. “With our joint research, we hope to develop gene editing technologies that help develop effective, safe medications and doses that can be tailored to a person’s genetic profile,” Dr. Kmiec said. “This will lead to precision and personalized cancer therapy at its very best.”

“We have been working closely with Dr. Kmiec and the Gene Editing Institute for the last nine months to generate preliminary data to support this ground-breaking idea and grant application,” said Haim Gil-Ad, CEO of NovellusDx. “We are excited that the BIRD Foundation with its stringent review process found our application worthy of the generous funding, which also provides external validation. This work has the potential to change the way functional genomics is done. Once the genetic makeup is known, we will be immediately able to test and monitor the effect of the patient mutations in live cells.”

The BIRD Foundation grant recognizes the Gene Editing Institute’s pioneering work to advance gene editing toward clinical applications in cancer research. The Gene Editing Institute is partnering with The Wistar Institute to develop translational genetic approaches to melanoma cancer research, and with Bio-Rad Inc. to advance a gene editing educational curriculum. In addition, with funding from the U.S. National Institutes of Health, the Gene Editing Institute is developing a gene editing strategy for the treatment of sickle cell anemia.

The BIRD Foundation supports projects without receiving any equity or intellectual property rights in the participating companies or in the projects themselves. BIRD funding is repaid as royalties from sales of products that were commercialized as a result of BIRD support. The Foundation shares the risk and does not require repayment if the project fails to reach the sales stage.

The Gene Editing Institute at the Graham Cancer Center is a worldwide leader in personalized genetic medicine. Founded and led by Dr. Kmiec, the Gene Editing Institute is unlocking the genetic mechanisms that drive cancer and that can lead to new therapies and pharmaceuticals to revolutionize cancer treatment. The Gene Editing Institute also provides instruction in the design and implementation of these precise new genetic tools.

About the Helen F. Graham Cancer Center & Research Institute at Christiana Care

The Helen F. Graham Cancer Center & Research Institute, a National Cancer Institute Community Oncology Research Program, is part of Christiana Care Health System. With more than 220,000 patient visits last year, the Graham Cancer Center is recognized as a national model

for multidisciplinary cancer care and a top enroller in U.S. clinical research trials. Its Gene Editing Institute, Center for Translational Cancer Research, Tissue Procurement Center, statewide High-Risk Family Cancer Registry and collaborations with world-renowned scientists at facilities such as the University of Delaware and The Wistar Institute in Philadelphia are opening new avenues to more quickly translate cancer science into cancer medicine.

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