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# Wistar and Penn Medicine Collaborate on $12.1 Million SPORE Grant in Melanoma

***Wistar's Meenhard Herlyn to Lead Project to Develop New Melanoma Therapies***

PHILADELPHIA—(September 16, 2014)— The Wistar Institute's Meenhard Herlyn, D.V.M., D.Sc., is the principal investigator on a $12.1 million Special Program of Research Excellence (SPORE) grant, a prestigious National Cancer Institute collaborative grant that brings together researchers at Wistar and the University of Pennsylvania to develop new melanoma therapies. The goal of this SPORE is to translate fundamental laboratory discoveries into new therapeutics that will benefit patients of melanoma and other skin cancers.

Melanoma is the deadliest form of skin cancer and the fifth deadliest form of cancer, overall. If caught early, melanoma is considered treatable. However, no therapy has shown lasting effect for late-NCtage, metastatic melanoma. According to NCI statistics, an estimated 76,100 new cases of melanoma will occur in 2014 in the U.S. alone, and it will kill 9,710 people.

Wistar is the first basic research NCI-designated Cancer Center to be awarded a SPORE grant. The emphasis of the SPORE is on transforming laboratory discoveries into new therapeutics and diagnostic techniques.

"Melanoma incidence may be on the rise, but I believe we are at the cusp of a revolution in new melanoma therapies and therapeutic strategies, powered by newly emerging research," said Herlyn the Caspar Wistar Professor in Melanoma Research and director of The Wistar Institute Melanoma Research Center. "This SPORE benefits from over 30 years of teamwork in melanoma research between The Wistar Institute and the University of Pennsylvania, and we have put into place a collaboration that will certainly reduce the threat of this terrible disease."
This new SPORE grant will fund four melanoma research projects:

1. **Targeted Combination Therapy for Melanoma**
   Investigators: Herlyn and Lynn Schuchter, M.D. (Penn)
   Targeted therapies—drugs that bind to and inhibit proteins that may cause disease—have shown great promise in melanoma, although patient tumors inevitably develop resistance to these drugs. This study will look at the effects of combining Vemurafenib, a drug that targets mutant BRAF proteins, and PX-866, a drug that targets the protein PI3K. Both mutant BRAF

and PI3K are potent drivers of melanoma tumors, and the researchers believe that targeting both proteins at once may overwhelm the ability of the tumor to develop resistance.

2. **Autophagy Modulation for Melanoma Therapy**
   Investigators: Ravit Amaravadi, M.D. (Penn) and David Speicher, Ph.D. (Wistar)
   This project is designed to test the idea that inhibiting autophagy (cancer cells "eat themselves" in order to survive) will have a synergistic effect when used with BRAF inhibitors.

3. **Association of Inherited Variation in Immune Mediated Adverse Events and Response to Ipilimumab**
   Investigators: Katherine Nathanson, M.D. (Penn) and Peter Kanetsky, Ph.D. (H. Lee Moffitt Cancer Center & Research Institute)
   The goal of this project is to find the genetic markers that predict which patients do poorly when they take Ipilimumab, an FDA-approved drug that targets CTLA4, a protein that can slow the immune response to cancer. While the drug is designed to re-activate a patient's immune system, in some patients it causes an over-reaction that is capable of causing death. By identifying genetic markers in over 1,000 patients from recent clinical trials, the researchers hope to identify which patients may be able to use Ipilimumab safely and effectively.

4. **Engineered T Cell Therapy for Melanoma**
   Investigators: Robert Vonderheide, M.D., D.Phil., and Carl June, M.D. (Penn)
   This project explores the use of "adoptive cellular therapy"—modifying a patient's own T cells to target metastatic melanoma cells. The researchers will conduct a clinical trial that will take a patient's T cell and transform them to target c-MET, a protein that cancer cells exhibit in overabundance on their surface.

In addition to the research projects, the SPORE grant will also support three "cores" designed to further support the SPORE team's scientific efforts. These cores include an administrative core to maximize collaboration between Penn and Wistar; a biospecimen and pathology core to provide SPORE researchers with high quality melanoma tumor samples; and a biostatistics core to help analyze and disseminate research results of the SPORE's experiments and clinical studies.

Research Developmental Projects, also called Pilot Projects, and Career Development Awards will allow the SPORE to support additional projects and investigators, particularly since both Cancer Centers provide further financial support. The SPORE is expected to be the focal organizational structure on campus for all activities in melanoma and other cancers of the skin, including basal cell carcinoma, squamous cell carcinoma, and cutaneous T cell lymphoma.

The NCI grant number for this SPORE is 1 P50 CA174523-01A1.

*The Wistar Institute is an international leader in biomedical research with special expertise in cancer research and vaccine development. Founded in 1892 as the first independent nonprofit biomedical research institute in the country, Wistar has long held the prestigious*

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