



## Hope Funds for Cancer Research

Press Release

### Announces Newly Published Research in the journal *Cancer Research* from Postdoctoral Fellow

For Immediate Release  
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Newport, RI - September 16, 2015 - In a paper published yesterday in the journal *Cancer Research*, Hope Funds Fellow Leni S. Jacob working in the laboratories of Frank Slack at Beth Israel Deaconess in Boston and Joan Massague at Memorial Sloan-Kettering Cancer Center in New York describes the role of genetic alterations in metastasis.

Moreover, Dr. Jacob and her colleagues found that selection of genetic variations that preexisted in parental populations were associated with increased metastatic capability. Conversely, they found the expression of a naturally occurring genetic alteration (wild-type BRAF allele) in metastatic cells inhibited metastatic outgrowth as well as tumor initiation. These findings provide further clues and understanding of the ability of cancer cells to migrate to distant organs, which is the leading cause of death from cancer.

"We are privileged to have funded this exceptional research and are grateful to these researchers for furthering our understanding of metastasis. These findings not only advance our fundamental knowledge of how cancer cells spread to other organs, but provide information that may some day lead to the disruption of this process, and increase patient survival," states Leah Rush Cann, Chair of the Executive Committee of the Hope Funds Board of Trustees.

The research published in the September 15, 2015 issue of the journal *Cancer Research*, describes this novel work.

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#### About Leni S. Jacob, Ph.D.

Dr. Jacob is in the laboratory of Frank Slack, Ph.D., at Beth Israel Deaconess/Harvard. Prior to joining Dr. Slack's lab, she was at Memorial Sloan-Kettering Cancer Center, in the laboratory of Joan Massague, Ph.D. Dr. Jacob's project aims to study the most difficult-to-treat subset of cancer cells from most cancer types, cancer cells that have spread, or metastasized, to other organs. Metastatic disease is the greatest impediment to the therapeutic care of cancer patients and accounts for more than 90% of cancer-related deaths. Even following the successful treatment of localized primary cancers, including those of the breast, lung, prostate, kidney, and thyroid, the risk for developing metastatic lesions remains substantial. Cancer cells that leave the primary tumor, or disseminated tumor cells (DTCs), can often lay dormant at distant organ sites for months or years, resistant to current therapies, before developing into overt metastatic tumors. Disseminated tumor cells likely employ potent molecular programs to persist at distant organ sites despite the stresses incurred from cancer therapies and adapting to an unfamiliar cellular environment. Very little is known about DTC biology because few tools and experimental



models exist to study them. Through this project Dr. Jacob is generating experimental model systems of latent cancer and will use these tools to reveal and dissect the genes and molecular pathways that promote DTC survival. Uncovering the molecular mechanisms on which DTCs rely will provide targets for the design of novel cancer therapeutics that have the potential to cut rates of cancer relapse.

Dr. Jacob is the Hope Funds for Cancer Research Green-Burgess Fellow.



Dr. Jacob being presented the Green-Burgess named fellowship with Mitchell Burgess and Robin Green at the 2014 Hope Funds for Cancer Research Fellows Dinner.

#### **About Hope Funds for Cancer Research**

The Hope Funds for Cancer Research was formed in 2006 by a group of concerned individuals who have experience in oncology, intellectual property law, investment banking, philanthropy, sociology, and the arts to establish a funding vehicle that would take a rational scientific, medical, and investment approach to granting money to the most interesting and promising research efforts to address the most difficult-to-treat cancers, including pancreatic, lung, liver, sarcomas, esophageal, brain, gastric, and ovarian cancers. These cancers are insidiously aggressive illnesses that kill most of their victims within months, even with aggressive chemotherapy. The Trustees of the Hope Funds for Cancer Research believe that funding research that could lead to breakthroughs in these areas and increase life expectancy in these types of cancers is at the core of our mission. The Hope Funds for Cancer Research is a 509 (a)(1) charity under 501(c)(3) of the Internal Revenue Service's code. For additional information about the organization, please visit <http://www.hope-funds.org> or call 401-847-3286.

*Hope Funds for Cancer Research: Advancing Innovative Research in Understudied Cancers*

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