

## Canary Backgrounder:

**Vision:** At Canary Foundation, we envision a world of simple and safe test that identify and isolate cancer at its earliest, most curable stage. By re-orienting research toward early detection, we believe great advances in cancer research will finally take place and save untold lives and resources while improving quality-of-life for those diagnosed.

**Mission:** Canary Foundation is committed to incubating and the early cancer detection market with the ultimate outcome of delivering accurate, safe, and cost-effective early cancer detection tests for solid cancer tumors. Someday soon, early cancer detection tests will be commonplace and the first line of defense for cancer.

**Strategy:** For far too long, cancer research has been reactive with a focus on drug therapies that are expensive, too late in the game, and simply not effective enough in improving cancer patient outcomes. As the world's first non-profit dedicated solely to early cancer detection, the Canary Foundation set out to change that. Canary is funding, discovering and developing innovative, routine tests for early cancer detection that could forever change cancer care and its devastating consequences. Based on a results-only business model and cross-disciplinary collaborations with renowned researchers, scientists, and global institutions, we are building a cancer detection platform that promises to be the answer to next-generation cancer care worldwide. There has been a reduction in cancer over the past 10-20 years; yet investment in outcomes hasn't changed. 1/3 can be attributed to prevention (10% of \$); 1/3 early detection (5% of \$); 1/3 therapeutic improvements (85% of \$)

**Who Are We?** Canary Foundation is a non-profit organization dedicated to discovering highly sensitive and specific markers of early stage cancer and building tests for these markers. The goal is to identify cancer through a simple blood test, isolate the disease through imaging scans and then to intervene early enough to dramatically increase the chance of a full recovery with minimal side effects.

**What's Different?** Canary Foundation is the world's first non-profit organization dedicated solely to the funding, discovery and development of tests for early cancer detection. We have assembled teams of cancer researchers recognized by their peers as leaders in their disciplines from across multiple institutions and disciplines to attack the problem of early detection in a new, collaborative, action-oriented manner with the foremost objective of translating research into clinical applications.

- Dedicated to early detection
- Leaders in collaborative science
- Integrated Blood and Imaging-Based Research Center
- Focused and managed research
- Best-in-class talent
- 100% of donations goes to research

**Background:** Early Detection Saves Lives; Canary Foundation was founded in 2004 by Don Listwin, a successful high-technology executive, who lost his mother to misdiagnosed ovarian cancer. Don discovered that less than 15% of research funding goes to early detection even though early intervention is far more effective than late stage treatment. Surprisingly, little funding is available to researchers investigating new ways to detect cancer at its earliest, curable stages.

### **Key Milestones**

- Tumor-activatable Minicircles for Early Detection of Cancer from the [Gambhir Lab](#) uses a unique strategy to force tumor cells (if they exist) to produce a blood biomarker that would otherwise not be present. (2015)
- FDA approves microbubble imaging for clinical trials in humans (2014)
- Canary adding Brain, Breast, and Colon Cancer Programs (2011)
- Canary Center at Stanford for Cancer Early Detection Created (2009)
- Canary researches obtain \$11.5 million government grant for Ovarian blood and imaging clinical trials. (2009)
- Magneto-nano sensor developed to measure blood bio-markers. (2009)
- Lung Cancer Team begins to identify biomarkers in nonsmokers. (2009)
- Pancreatic Cancer Team develops biomarker candidates for clinical use. (2009)
- Clinical study launched to reduce over-treatment of prostate cancer - Prostate Active Surveillance Study (PASS) (2008).
- Partnership with NCI's Early Detection Research Network initiated to isolate lung cancer biomarkers in non-smokers (2008).
- Canary Foundation of Canada founded (2008).
- Strategic partnership with Stanford formed to create integrated facility for blood based and imaging based early detection tests.
- Focus extended to four major cancers – Ovarian, Pancreatic, Prostate, Lung Cancer Programs and initiated Baseline Program.
- Ovarian biomarkers evaluated in prediagnostic blood samples (2007).
- Novel microbubble/ultrasound-based imaging technique validated in mouse models (2007).
- Palladin gene mutation discovered in hereditary pancreatic cancer (2006).

### **Canary Foundation's Scientific Leadership**

Dr. Sam Gambhir, Stanford University – Director of Canary Center at Stanford and Canary Scientific Program Director

Dr. Lee Hartwell (2001 Nobel Laureate), Fred Hutchinson Cancer Research Center  
Dr. Frank McCormick, UCSF Helen Diller Family Comprehensive Cancer Center

Dr. Teri Brentnall, University of Washington – Pancreatic Cancer Program Lead

Dr. Charles Drescher, Fred Hutchinson Cancer Research Center – Ovarian Cancer Program Co-Lead

Dr. Samir Hanash, MD Anderson Cancer Center – Lung Cancer Program Lead

Dr. Peter Nelson, University of Washington & Fred Hutchinson Cancer Research Center – Prostate Cancer Program Lead



# CANARY FOUNDATION

*Stopping Cancer Early - The Best Possible Investment*

Dr. Martin McIntosh, Fred Hutchinson Cancer Research Center –Ovarian Program Co-Lead

Canary Foundation, named after the “early detection” role canaries once played by alerting coal miners of hazardous fumes, is the first nonprofit devoted exclusively to early detection. All administrative costs are underwritten by operating grants. Media contacts:  
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