Message from the Founder

October 2009

The third quarter of 2009 has given Canary many reasons for celebration. We surpassed many of the milestones that were set in previous years. Our fundraising efforts were highly rewarded, and with the addition of several new clinical trial efforts, our science programs are stronger than ever. Our partnerships have expanded as well, reflecting Canary’s emerging leadership position in cancer early detection. Events of the past three months have given Canary much to be thankful for and have strengthened our position going forward.

Key to realizing our vision, mission, and strategy is our partnerships. As many of you know, we settled into our new home at the Canary Center for Cancer Early Detection at Stanford—a facility with space dedicated solely to cancer early detection programs. The Proteomics Core at the Canary Center is now operational, and the Chemistry Division will be completed this quarter.

Through this collaboration with Stanford, we have formed a host of other relationships. The Prostate Team has engaged three new sites for the Prostate Active Surveillance Study (PASS) trial: Eastern Virginia Medical School, under the direction of Dr. Raymond Lance; Harvard University Medical School, under the leadership of Dr. Martin Sanda; and University of Michigan Medical School, under the direction of Dr. John Wei.

In addition, the Lung Team is proud to announce two new partnerships in China. In never-smoker lung analysis, the Tianjin Lung Cancer Institute of Tianjin Medical University General Hospital, China, under the leadership of Dr. Qinghua Zhou, has become a partner in the joint Early Detection Research Network (EDRN) and Canary project to discover biomarkers of lung cancer among never-smokers. The Tianjin group will support the sequencing of 20 lung cancer cell lines from people who have never smoked—the same cell lines that Canary and EDRN investigators are analyzing. Sequencing and sequence analysis will be conducted by Shanghai Bio Corporation and the Chinese National Human Genome Center in Shanghai.

In another milestone for Canary, Ovarian Team member Nicole Urban, ScD, and collaborators of the Pacific Ovarian Cancer Research Consortium (POCRC) have been awarded a five-year Specialized Programs of Research Excellence (SPORE) grant of $11.5 million. The SPORE grant will allow Dr. Urban and fellow researchers to continue research in distinguishing tumor markers and developing blood tests to identify and assess risk for early detection of ovarian cancer.
Message from the Founder (continued)

We are also thrilled that GenoLogics of Canada has recently donated their biomedical infrastructure to Canary Foundation, permitting the collection, cataloging, and annotation of all samples—tissue, blood, and so on. This will be used in conjunction with the EDRN software to verify and validate the biomarkers discovered using the GenoLogics software.

Equally important is our flourishing relationship with Orchard Supply Hardware (OSH). OSH CEO Rob Lynch has engaged in building support for Canary through his company’s stakeholders. On September 19, he committed five more years of OSH support to Canary Foundation—a wonderful follow-up to the record-breaking $630,000 OSH raised through an annual golf tournament at Blackhawk Country Club in July.

On the fundraising front, the fifth annual Cabana gala held on September 19 proved to be the best to date. The live auction and the Finance the Foundation portions of the evening raised nearly $750,000. We thank all those who attended and those who donated. We cannot wait to see what feats will be accomplished next year.

As technology continues to develop, so does our science team. This month, Nature Medicine will feature a story on the most recent development in the technology used for cancer early detection—a new blood biomarker that is 100 to 1,000 times more effective than the current “gold” standard. The paper proves that the technology is very sensitive, meaning that a small amount of protein can be detected in blood to find cancer earlier for intervention. As the Director of the Canary Center at Stanford, Dr. Sanjiv (Sam) Gambhir continues to bolster Canary’s purpose and credibility in the science realm.

In other news, we have begun a series of open houses and lunches to introduce the community to the Canary Center at Stanford. We look forward to seeing you soon.

I eagerly anticipate this coming quarter and the continuing success Canary is sure to achieve.
Cabana Gala Raises Nearly $750,000 for Cancer Early Detection Research

October 2009

The night of September 19 proved to be a perfect one for our fifth annual Cabana gala. The weather was ideal as 150 guests gathered for food, drinks, and conversation on the grounds of a private home in Woodside, California. As the evening progressed, the guests were ushered from the lawn to an elegant tent for the program. A record for Cabana events to date, nearly $750,000 was raised in the auction alone for cancer early detection research and the newly opened Canary Center for Cancer Early Detection at Stanford. How quickly a year passes—it was at the 2008 Cabana that Dr. Sanjiv (Sam) Gambhir officially announced the new center.

Janice Edwards, community relations director and host and executive producer of Bay Area Vista on NBC Bay Area, emceed the presentation portion of the evening. She shared her commitment to cancer early detection and her admiration of Canary Foundation. Edwards connected audience members with one another by asking all those who have fought cancer personally, or who have watched a loved one struggle, to raise a hand. Hands were raised by every person in the tent—a testament to cancer’s prevalence and to Canary’s objective. She then introduced Don Listwin, founder and chairman of Canary Foundation.
Don Listwin acknowledged Canary’s accomplishments in the five years since its inception and touched on the great potential for success in the next five years. Additionally, he showed a five-minute video recapping Canary’s remarkable progress—especially with the establishment of the Canary Center at Stanford. The video highlighted the partnership between Stanford leadership and Canary Foundation and their commitment to making cancer early detection tools available. It also reinforced Canary’s focus on funding projects that will attract larger funding from government and other sources after results are proven.

Dr. Sam Gambhir, MD, PhD, professor of Radiology and Bioengineering at Stanford University, chief of the Nuclear Medicine Division, director of the Molecular Imaging Program at Stanford, and director of the Canary Center at Stanford, spoke of his excitement about and commitment to the Canary Center and the possibilities it holds for cancer early detection. He disclosed the newest development in cancer early detection technologies—a blood biomarker that is 1,000 times more sensitive and, therefore, more effective than the current gold standard. As Canary Foundation continues to collaborate and innovate, identifying and isolating cancer at its earliest, most curable stage becomes progressively achievable.

Jay Fiske, founder of MaestroSoft and Northwest Benefit Auctions, donated his services as auctioneer for the second half of the evening, traveling from Seattle to support Canary Foundation at the event. Like many of us, his life has been affected by cancer, and he shares our dedication to finding an early detector. Fiske’s booming voice and cheerful demeanor raised the mood of the evening to a new level. The round of live auction items and Finance the Foundation raised nearly $750,000 for early detection. The night concluded with dancing to the musical entertainment provided by the Bay Area band Notorious.

Thanks to all the volunteers and sponsors for the evening, including Vardy’s Jewelers, Chef Traci des Jardins, John Bentley and John Bentley’s Restaurant, The Hiller Museum, Florabella, Plumpjack Group, Pruneridge Golf, Ross Bott, Jay Fiske, Susan Siravo, Janice Edwards, John Stuart, and the Woodside Bakery and Café.

Save the date: Our next Cabana gala is scheduled for September 18, 2010, in Woodside, California.
Don Listwin Appointed to the NCI Board of Scientific Advisors

October 2009

Canary Foundation is proud to announce the appointment of Don Listwin to the National Cancer Institute’s Board of Scientific Advisors (BSA). The Director of the National Cancer Institute (NCI) appoints members to five-year terms. The 35-member Board provides advice to the director and deputy director of NCI and the directors of NCI divisions, offices, and centers on a wide variety of matters concerning scientific program policy and progress and future direction of extramural research programs.

Don Listwin's appointment is a triumph for Canary Foundation, as he joins Canary's Scientific Program Director, Dr. Sam Gambhir, as a co-advisor on the NCI BSA. They will assess awarded grants, cooperative agreements, and contracts in addition to reviewing all matters pertinent to the goals and mission of the NCI's programs. The next Board meeting will be held November 2–3, 2009, in Bethesda, Maryland.

NCI leads the National Cancer Program and the National Institute of Health's effort to dramatically reduce the burden of cancer and improve the lives of cancer patients and their families through research into prevention and cancer biology, development of new interventions, and training and mentoring of new researchers. For more information about NCI, please visit the NCI website or call NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237).
Canary Derby 2010 Website Is Up and Running

October 2009

Check out the new Canary Derby site for our Canadian Derbies! This year’s site is easier to navigate, and we hope you explore all the features. Register your team, donate online, browse event information, read tips on fundraising, and view photos from previous years’ races. You can also keep track of registered teams and their fundraising progress. Keep in mind that the funds raised for the Victoria and Vancouver Derbies finance cancer early detection research in British Columbia. The Victoria Derby takes place June 12, 2010, and the Vancouver Derby takes place September 25, 2010—start the fundraising now and speed past the competition!

The Victoria and Vancouver Derbies of 2009 set the bar high: The second annual Vancouver Derby raised more than CAN$113,000, with the top fundraising team of Webnames.ca easily taking the Fundraising Trophy with its total of over CAN$13,000. Not to be outdone by Vancouver, Vancouver Island committee members pulled out all the stops on Sunday, June 28, during the fourth annual Victoria Derby at Vancouver Island Technology Park. Thirteen teams raised CAN$129,000, with GenoLogics taking the top fundraising honors for raising almost CAN$13,000. The Obstacle Course was a big hit with teams and spectators, so look for it again during the 2010 Canary Derby events.

For more information about Canary Foundation of Canada or the Canary Derbies in Victoria and Vancouver, please contact Pat McCowan.
Science Update: Ovarian Cancer Program

October 2009

The Canary Ovarian Cancer Team has made great strides in both the blood test and molecular imaging arenas. Several blood biomarkers have successfully progressed to advanced-phase validation, and a novel imaging method—targeted ultrasound—is about to be tested in women for the first time. One challenge lies in identifying the highest performing combination of blood and imaging tests; therefore, the Ovarian Team has added a modeling project to predict the cost-effectiveness and survival benefit of various two-step screening programs.

There is more than one way to perform either blood or imaging tests. For example, we need to choose between using a single blood biomarker or multiple ones (and which combinations). We must also decide whether to use a single numeric blood biomarker threshold applied to the entire screening population or an individual woman’s own history of biomarker behavior to detect abnormal changes. Similarly, once targeted ultrasound and other imaging technologies become available, the number of options for the second step of the screening program will also increase.

Testing each combination of screening tests in women would be prohibitively expensive. To circumvent this problem, our team is implementing a model to screen a virtual population of women undergoing ovarian cancer screening to predict the cost (measured in dollars) and benefit (measured in years of life saved) associated with each screening strategy. This approach is not intended to replace actual clinical trials. Rather, its benefit lies in guiding the choice of which screening strategy is most worthy of pursuing in a clinical trial.

Of course, the model needs to produce accurate predictions to achieve its goal. Our Ovarian Team has been collecting real-world data in order to account for as many aspects of a screening population as possible. This includes how frequently ovarian tumors, their subtypes, and other benign conditions occur among women and at what stages they are detectable by the various blood and imaging tests. Furthermore, the team’s clinicians are examining the expenses associated with each test, including physician and laboratory fees, instrument usage, and materials costs.

Our investigators are currently adding all this information to the model and have already begun to simulate ovarian cancer screening cohorts. Our goal is to gain a detailed understanding of the costs and benefits of many screening strategies, particularly of novel methods that rely on multiple blood biomarkers (compared with single biomarkers) and on molecular imaging (compared with anatomical imaging). We look forward to presenting the findings at Canary’s next symposium in May 2010.
The Canary Prostate Cancer Program continued to build momentum over the summer through its focus on the Prostate Active Surveillance Study (PASS) clinical trial. Just one year after the first patients were enrolled, the study has now exceeded its first-year enrollment goals by more than twice the number of patients anticipated. We are rapidly approaching half of the 500 patients we aim to accrue for initial biomarker studies. Because each patient receives at least five years of follow-up, enrolling more patients in the first years speeds up the ability to analyze results and to build specimens for biomarker research.

PASS builds a valuable specimen resource for identifying biomarkers to distinguish potentially lethal forms of prostate cancer while helping patients manage their prostate cancer with frequent monitoring and the offer of treatment if progression is suspected. This multicenter study has been of great interest to other highly respected active surveillance clinical programs across the country.

In that regard, the Prostate Team is pleased to announce three new partnering sites for PASS, growing the trial from six to nine sites and expanding to the Midwest and East Coast. The new sites are Eastern Virginia Medical School, under the direction of Dr. Raymond Lance; Harvard University Medical School, under the leadership of Dr. Martin Sanda; and University of Michigan Medical School, under the direction of Dr. John Wei. Collaborating with these additional sites will allow the study to accrue more patients more quickly, increase the diversity of the patient population, and increase the biospecimen resource created for prostate cancer biomarker discovery and validation.

The new sites will join our current team of clinical sites participating in PASS in the United States and Canada: Stanford University, University of British Columbia, University of California at San Francisco, University of Texas Health Sciences Center at San Antonio, University of Washington, and Seattle Veteran’s Affairs Hospital. Central coordination through the Early Detection Research Network, as well as housing of the central biorepository, will continue at the Fred Hutchinson Cancer Research Center in Seattle.

The Prostate Team is also happy to report that the first peer-reviewed academic article for the PASS trial has been published. Entitled, “Canary Prostate Active Surveillance Study: Design of a Multi-institutional Active Surveillance Cohort and Biorepository,” the article is available in the journal Urology.
One of the Canary Lung Cancer Team’s goals is to identify biomarkers that will form the basis of a blood test to signal never-smokers at risk for developing lung cancer. The team has made excellent progress toward this goal over the summer.

As part of a biomarker discovery project with the Early Detection Research Network (EDRN), the team is analyzing lung cancer cell lines, tissues, and blood from smokers and patients who have never smoked. Candidate biomarkers will be identified by studying alterations in DNA, RNA, and protein levels that are unique to never-smokers with lung cancer. The team has initially focused on securing, preparing, and distributing the specimens needed for their analyses.

The study takes advantage of a valuable collection of lung cancer cell lines that were developed over several decades by Dr. Adi Gazdar at the University of Texas Southwestern Medical School. Dr. Gazdar’s group has now prepared sufficient quantities for distribution to all team members, and the team’s analyses of 40 cell lines are under way. The cell lines are divided into four groups, consisting of lines from smokers with or without a KRAS mutation and lines from never-smokers with or without an EGFR mutation. Data are being compared between different smoking statuses and different mutation types to identify promising biomarker candidates.

In a set of studies complementary to the cell line analyses, the team is accessing a resource of carefully collected and well-annotated tissue and blood specimens from Drs. Stephen Lam and Wan Lam at the British Columbia Cancer Agency in Vancouver. The Vancouver group is now completing the distribution of over 120 samples, representing lung cancer from smokers and never-smokers with matched control specimens, to each of the investigators for analyses.

The EDRN-Canary lung cancer project is also pleased to announce a new partnership that will allow sequencing of the cell lines from the study to be funded and conducted in China. Sequencing data will enrich the molecular characterization of lung cancer from never-smokers. The Tianjin Lung Cancer Institute of Tianjin Medical University General Hospital, China, under the leadership of Dr. Qinghua Zhou, will support the cell line sequencing. The sequencing and its subsequent analysis will be conducted by the Shanghai Bio Corporation and the Chinese National Human Genome Center in Shanghai.

The approaches the Canary Lung Team is undertaking will result in a tremendous flood of data that will require interpretation and integration. In order to manage this process for multiple institutions, sample types, and data platforms, Canary Foundation has initiated the creation of a software system to support the integration of clinical and research data in one end-to-end system. Software architecting is a joint effort by the NASA Jet Propulsion Laboratory and GenoLogics Life Sciences Software, with additional support and input by the EDRN Data Management and Coordination Center.
Science Update: Lung Cancer Program (continued)

This software will first become available in early 2010 for use in the EDRN-Canary lung cancer biomarker project. In addition, the platform will be hosted at the Canary Center at Stanford as a tool for additional biomarker discovery and validation studies by all Canary teams.
Science Update: Pancreatic Cancer Program

October 2009

Canary's Pancreatic Cancer Team is currently engaged in extensive blood biomarker discovery projects. Blood tests are a very practical choice for the first step of a cancer screen, since blood can be readily and inexpensively accessed. But because biomarkers must cross tissue boundaries to reach the blood stream and then be diluted by the sheer blood volume, we expect to find them at very low concentrations in this medium. This makes the discovery and quantification of biomarkers in blood a very difficult undertaking. Therefore, our investigators are also considering fluids that are found much closer to the tumor, where biomarkers are likely to be more concentrated.

Pancreatic juice is an example of a fluid that has more concentrated biomarkers. It is secreted by the pancreas and contains enzymes that help break down fats, proteins, and carbohydrates. Investigators in the laboratory of Pancreatic Team member Dr. Teri Brentnall at the University of Washington, Seattle, have discovered a protein biomarker that, compared to healthy individuals, is elevated in pancreatic juice from patients harboring early, pre-malignant pancreatic lesions. Canary's assay development pipeline, headed by Dr. Brad Nelson of the British Columbia Cancer Agency in Victoria, created the assay that was used to quantify the amount of this biomarker in the patient samples for this study. The results are encouraging for our team, because this particular biomarker works best at the stage (pre-malignant) that we really want to detect.

Does this biomarker have potential for clinical use? The jury is still out. Pancreatic juice is obtained through an endoscopic procedure that is more invasive, more expensive, and riskier to the patient than a simple blood draw and therefore cannot be used to screen a wider population. Our team is rigorously examining this biomarker for its potential in blood while continuing discovery efforts for other novel pancreatic cancer biomarkers. Several such biomarkers are already in our queue for pilot experiments using standardized sets of blood samples. Biomarkers that successfully pass each of these pilot tests will then undergo rigorous validation on a large set of patient specimens. We will provide further updates as we obtain results from these studies.
The Giving Season: You’re Also a Partner

October 2009

This past year, though faced with challenges, our community has found remarkable ways to step up to support cancer early detection. This tells us that to all of you, cancer early detection makes perfect sense and remains an urgent healthcare matter. Early detection is linked to economic issues, health, and quality of life. Low-cost, efficient tests are a necessity.

We appreciate that you place your confidence in our programs—programs that are quickly headed towards solutions. We view your desire for early detection tools as a mandate, so we keep our programs targeted and trim. We are making good progress and are looking forward to meeting goals that get us closer to making early detection a reality.

As we head into the giving season, we ask you to consider making a gift to Canary Foundation to fund important research. Thank you in advance for your support—we have every confidence that, with your help, we will meet our goals and deliver the tests so badly needed to detect cancer early. Ways of giving include:

General Fund—A gift of any size can go to the General Fund or towards a particular program.

Community Fund—Gifts of $500 or more can be directed to the Community Fund and will be funneled into the program area with the greatest need.

Founder’s Fund—Gifts of $5,000 or more can go to the Founder’s Fund. The founder will direct these funds to move special challenges, initiatives, and projects forward.

Family foundations—Families can make gifts outright or through family foundations. A multiyear gift may make it easier to fulfill the family’s intention to support.

Planned giving—including Canary Foundation in your will is easy and a good vehicle to include in your giving plans. Also, the Charitable IRA Rollover is still an option for those of you who are over 70 years of age and wish to make a gift up to $100,000 without a tax consequence.

For other ways of giving please visit our support page or call Therese Quinlan at 415-740-6521.
Upcoming Events

October 2009

The Canary Symposium is scheduled for May 25–27, 2010, in Palo Alto, California. In the past, speakers and audience have included an impressive mix of leading academic researchers and clinicians, as well as commercial and foundational partners. The three-day symposium will include many cutting-edge scientific presentations and networking events.

The BC Cancer Foundation’s Ride to Conquer Cancer will take place June 19–20, 2010. Cyclists will spend the two days riding from Vancouver to Seattle. The funds raised by U.S. riders through The Ride to Conquer Cancer will benefit Canary Foundation. For more information about the ride, please visit The Ride to Conquer Cancer website. For more information about U.S. riders, e-mail Pat McCowan.

The Victoria Derby takes place on June 12, 2010, and the Vancouver Derby takes place on September 25, 2010. Register your teams and start the fundraising!

The 2010 Cabana gala is scheduled for September 18, 2010.