

Pathways



LUNG CANCER RESEARCH FOUNDATION®

Dedicated to Discovery

WINTER 2009, VOL 2

A NEWSLETTER FOR SUPPORTERS AND FRIENDS

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LCRF ESTABLISHES LUNG CANCER RESEARCH BENCH AT ARIZONA'S TGen

In January 2009, LCRF awarded \$75,000 to establish a lung cancer research bench at the Translational Genomics Research Institute (TGen) in Phoenix, AZ. TGen is a non-profit biomedical research institute focused on developing earlier diagnostics and smarter treatments. Translational genomics research is a relatively new field employing innovative advances arising from the Human Genome Project and applying them to the development of diagnostics, prognostics and therapies for cancer, neurological disorders, diabetes and other complex diseases. TGen's Lung Cancer Research Unit is addressing the following research areas:

- Predicting chemovulnerability of adenocarcinoma of the lung
- New, non-invasive markers of lung cancer metastasis
- Early diagnostic detection of lung cancer

The LCRF lung cancer research bench is designed to help accelerate research discoveries for lung cancer treatments.

MAKING "STRIDES FOR LIFE" IN SOUTHAMPTON

On August 24th, 2008, LCRF hosted the 3rd Annual Strides for Life 3-mile fun run/walk around Lake Agawam in Southampton, New York. A record 800 people turned out to enjoy the early morning sunshine and make strides in the fight against lung cancer. Three-time lung cancer survivor Lorette Pucylowski cut the ribbon to start the race alongside the event's Honorary Chair and Co-Anchor of FOX 5 News, Rosanna Scotto, who was busy cheering on the crowd. At the finish line, the runners were rewarded with a fabulous Tory Burch goodie bag! LCRF wishes to thank everyone who participated and contributed to the success of Strides for Life 3. The race raised over \$430,000 in support of critical lung cancer research and education programs.



"We are honored and delighted that TGen's research has merited the support of the Lung Cancer Research Foundation. Their involvement is a great inspiration to all of us," said Michael Bassoff, President, TGen Foundation.

From left to right: Event Co-Chairs: Laurie Carson, Lynne Tarnopol, Kimberly Kravis Schulhof; a young member of Team Pat; Rosanna Scotto crosses the finish line.

MESSAGE FROM THE PRESIDENT AND FOUNDER



It has been ten years since lung cancer claimed the lives of both my brother and uncle six months apart. My brother, a non-smoker, lived nine months from his diagnosis and my uncle, a former smoker, lived only eight weeks.

At the time of their deaths, major breakthroughs, particularly the advent of targeted therapies such as Avastin, Tarceva and Iressa, had yet to be discovered. These notable successes have changed the way lung cancer is treated today and have helped many patients live longer and better lives.

However, a decade later, lung cancer remains the leading cause of cancer death in both men and women worldwide and while survival rates have seen small incremental improvement, more progress is necessary.

At the Lung Cancer Research Foundation (LCRF), we recognize the urgency for new scientific advances and

developments that will lead to the next generation of lung cancer treatments. LCRF is committed to supporting the nation's leading investigators who are studying new pathways and diverse approaches, as they look for clues to find a cure for this challenging disease. Our 2008 grant recipients and their innovative research projects, outlined in this issue of *Pathways*, are leading examples of this pursuit of new knowledge.

Together with your support, LCRF will continue its quest to help scientists discover that "eureka moment" that we hope will lead to the cures we all so desperately seek.

I hope you enjoy reading about our great progress over the past year knowing that none of these efforts would be possible without the tremendous generosity and loyal support of our donors, friends and volunteers.

Thank you.

Laurie C. Corson

President and Founder, Lung Cancer Research Foundation

2008 LCRF RESEARCH GRANT RECIPIENTS:

In 2008, LCRF conducted its first "open call" for grant submissions. We received numerous requests for funding from various institutions throughout the country, and from outside of the United States. Each submission was peer-reviewed by the LCRF Medical Advisory Board, based upon NIH (National Institute of Health) standard guidelines for scientific merit and originality of concept, with additional consideration given to each project's consistency with the mission of LCRF. As a result, LCRF awarded ten grants, totaling \$500,000, to the following institutions and investigators:

University of Colorado Denver

2008 LCRF Scientific Merit Award

Rachel M.A. Linger, Ph.D.

Research Project: "Novel Biologically Targeted Therapy for the Treatment of Non-Small Cell Lung Cancer (NSCLC)"

Columbia University Medical Center

Charles A. Powell, M.D.

Research Project: "Molecular Features of Lung Adenocarcinoma Progression"

Dartmouth Medical School – Norris Cotton Cancer Center

Charles Brenner, Ph.D.

Research Project: "Dissecting the Function of a Gene Expression Brake Pedal"

Johns Hopkins University-Sidney Kimmel Cancer Center

Edward Gabrielson, M.D. and Julie Brahmer, M.D.

Research Project: "A Novel Molecular Pathway as a Target for Lung Cancer"

M.D. Anderson Cancer Center

Joerg J. Jacoby, Ph.D.

Research Project: "Study of HIF-1 Alpha as a Target for PX-478, a new drug for Lung Cancer"

Memorial Sloan-Kettering Cancer Center

Marc Ladanyi, M.D.

Research Project: "Harnessing New Genomic Technologies to Understand Lung Cancer"

Tufts Medical Center

Christina Baik, M.D., MPH

Research Project: "Effect of Reproductive Factors on the Development of Lung Cancer in Women"

University of Chicago Medical Center

Ralph R. Weichselbaum, M.D.

Research Project: "Identification of Pathways Activated by Genes Encoding Resistance to Cancer Treatment"

University of Michigan

Steven P. Zielske, Ph.D.

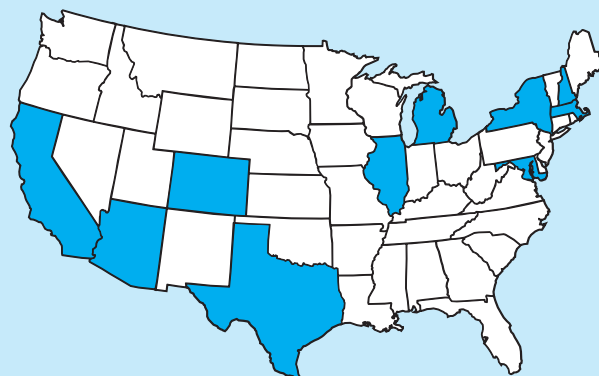
Research Project: "Cell Therapy for Treatment of Radiation Therapy-induced Lung Injury"

Wayne State University

Maik Hüttemann, Ph.D.

Research Project: "A Non-Invasive Gene Therapy for Lung Cancer"

LCRF's National Reach



LCRF KICKS OFF LUNG CANCER AWARENESS MONTH IN NOVEMBER

On November 3rd, 2008, LCRF hosted a scientific luncheon and lecture at the Mandarin Oriental Hotel to discuss the global treatment for lung cancer, **sponsored by Sanofi-aventis**. To mark the occasion, Mayor Michael Bloomberg proclaimed November in the City of New York as Lung Cancer Awareness month. We were honored to have Dr. James R. Rigas, Medical Director, Comprehensive Thoracic Oncology Program, Dartmouth-Hitchcock Medical Center, Norris Cotton Cancer Center, as our guest speaker and Sapna Parikh, M.D., Medical Reporter, Fox 5 News, as our Master of Ceremonies. Dr. Rigas' presentation covered the progress that has steadily been achieved since the beginning of chemotherapy but acknowledged that there are still significant challenges ahead. He commented that the era of biologic targeted therapy holds promise to achieve significant improvements in survival for lung cancer patients and encouraged continued collaboration between the scientific and philanthropic communities to explore these opportunities. A record 240 guests attended the luncheon and we are pleased to announce that the event raised over \$275,000 in support of lung cancer research and educational programs throughout the country.

LECTURE HIGHLIGHTS:

- The era of modern chemotherapy has seen the FDA approval of 6 drugs for lung cancer
- The development of targeted biologic therapy specific for lung cancer is the next wave of clinical development
- Some of the newest drugs which have been extensively studied have made small incremental improvement but more impact is necessary
- There are multiple classes of new biologic agents in development, including several LCRF funded projects related to:
 - Tumor Suppressor Genes
 - The Hedgehog Pathway



From left to right: Dr. Rachel Linger, Kimberly Kravis Schulhof, Laurie Carson, Dr. James Rigas, Dr. Sapna Parikh; Luncheon Guests: Carol Weisman, Lois Zaro, Bonnie Lautenberg, Jean Steinberg (seated); LCRF Grantees Dr. Marc Ladanyi, Dr. Rachel Linger, Dr. Charles Brenner.

LCRF APPOINTS NEW EXECUTIVE DIRECTOR



In June 2008, LCRF was pleased to welcome Deborah Eger Walsh as its first Executive Director. In this role, Deborah oversees all day to day operations of the Foundation, including special events, development activities, and grant management. Deborah brings over fifteen years of experience in special event planning, fundraising, and the non-profit sector. Her addition to the team will ensure that LCRF continues to grow at a rapid rate.

Deborah's connection to the cause is personal; her grandmother had lung cancer. After having her lung removed, she ultimately lost her battle as the cancer metastasized and spread to her brain. Not until then did Deborah realize that lung cancer is the leading cause of cancer mortality in both men and women worldwide, yet it receives less federal research funding per death than any of the other major cancers.

Prior to her position at LCRF, Deborah served as Event Consultant to Inspired Connections where she worked on projects for the Girl Scouts of Arizona, Arizona Women's Education and Employment, both in Phoenix, and The Bachmann-Strauss Dystonia & Parkinson Foundation in New York. During her tenure at The Bachmann-Strauss Dystonia & Parkinson Foundation, Deborah was responsible for producing their annual professional golf tournament and annual theatre benefit generating over \$1.8 million in funding for the organization. Her experience in fundraising was also previously developed as Development Director for the Westchester Philharmonic, including the organization's 20th anniversary celebration gala which raised more than \$100,000 in funding, and at previously held positions with Family Connections and Newark Beth Israel Medical Center in New Jersey.

Deborah holds a degree from Elon University, N.C., where she majored in Psychology and later pursued Master level studies in social work at Rutgers University in New Jersey.

LCRF INITIATES INAUGURAL SCIENTIFIC MERIT AWARD



Dr. Jim Dougherty, LCRF Board Member, presents Dr. Rachel Linger with the 2008 Scientific Merit Award.

In November, Rachel M.A. Linger, Ph.D., a Postdoctoral Fellow at the University of Colorado Denver School of Medicine received the inaugural LCRF Scientific Merit Award. This award acknowledges the scientific investigator whose research proposal was selected for outstanding overall merit by the LCRF Medical Advisory Board peer review. With the creation of this annual award, LCRF is proud to fund, expedite,

and advance pioneering scientific research projects that hold great promise for the future treatment of lung cancer patients.

As a scientist, why did you decide to focus on lung cancer?

Lung cancer is a devastating disease which kills more men and women than breast, colon, and prostate cancers combined. In the United States alone, the American Cancer Society estimates that there will be over 200,000 new cases of lung cancer in 2008. With a two-year survival rate under 25%, the prognosis for many of these patients is unacceptably poor. In addition to these reasons, I decided to focus on lung cancer because, like many Americans, a close family member is currently fighting this disease. I believe that more research in a variety of areas will lead to better outcomes for lung cancer patients.

What do you see as the greatest challenges/hurdles in the field of lung cancer research?

There are many challenges facing the field of lung cancer research. In my opinion, there are two major hurdles we must conquer in order to significantly improve survival and quality of life. First, we must identify biological targets and

develop new therapeutics directed at these targets. My research is focused in this area. Second, we must identify appropriate biomarkers and develop innovative clinical assays to help physicians implement the most suitable treatment strategy for each patient. These two hurdles go hand-in-hand, because we are learning that there is a great deal of variability among lung cancers. Eventually, I hope we will be able to tailor each patient's treatment to match their specific cancer.

Your research focuses on a special protein – can you explain why you feel this is a significant area to explore?

My research is focused on the role of a protein called Axl receptor tyrosine kinase. The presence of Axl makes lung cancer cells more invasive and increases the chance that the cancer will spread to other areas in the body. Thus, lung cancer patients with high levels of Axl present in their tumor have a poor prognosis. I believe that the presence of Axl also provides a survival advantage for the lung cancer cells, making them resistant to chemotherapy. My laboratory has developed inhibitors of the Axl protein and will test whether these inhibitors reduce survival and limit invasiveness of lung cancer cells. If proven correct, these findings could lead to opportunities to treat lung cancer more effectively.

How will the grant from LCRF impact your research?

The grant from LCRF will have a significant impact on my research by providing the primary funding for research supplies. Without the LCRF grant, my research would be proceeding at a much slower pace.

What does receiving the inaugural LCRF Scientific Merit Award mean to you?

Receiving the inaugural LCRF Scientific Merit Award is a tremendous honor for me. It is wonderful to know that the members of LCRF's Medical Advisory Board, who are leaders in the field of lung cancer research, have recognized my research as innovative and promising.

DONORS MAKE A DIFFERENCE: REMEMBRANCE GRANT NAMED IN 2009

LCRF is pleased to announce that a research grant will be named in remembrance of those individuals who lost their battle with lung cancer in 2008. This grant is made possible through the generosity of 656 individuals from across the country that made a donation to LCRF in memory of their loved one. These gifts representing 160 individuals and totaling more than \$53,000 enable the Foundation to establish a grant in their honor. This significant expression of support goes to show that every single contribution helps make a difference!



3 mile fun run walk
to benefit lung cancer research
Southampton, New York

4TH 2009 ANNUAL

SAVE THE DATE 08.23.09

SURVIVING WITH LORETTE: A STORY OF COURAGE AND GRACE



I was diagnosed with lung cancer in June 2001, seven months after my brother passed away from the disease. I was going in for my annual checkup and my doctor said "I looked good." I asked him to take an x-ray just to be on the safe side; having lost both my parents and brother to this dreaded disease, I didn't want to leave any boxes unchecked.

The next few days were like a whirlwind – I had the x-ray, followed by a CAT scan and needle biopsy which all confirmed that I had two separate lung cancers; the middle right lobe and the lower left lobe were compromised. My first reaction to this information was "tell me what I need to do to make this better." I was determined to fight this with everything that I had; I had to beat the odds in my family.

During chemotherapy, I mixed things up and wore Halloween wigs to every treatment. My catch phrase became "good morning, it is 92 and sunny."

My first surgery was in October 2001. At the hospital, I became known for my floor walks with the other patients – we formed a conga line and were all rooting for each other. I earned the nickname "strawberry" for my bright strawberry patterned PJ's. Six weeks later, I had my lower left lobe removed. This surgery was a little tougher but I continued my walks with other patients around the floor. The recovery from back-to-back surgeries took a while. You never think you will get better but you do.

Five months later, I was back to work and looking for a focus to help others going through the same ordeal. I got involved with Laurie Carson's "Steps for Breath" race, now called *Strides for Life*, and over the next three years, I set out to raise awareness of lung cancer and the limited resources for research. In 2004, I wrote a letter to the CEO of Bank of America telling him my story and asking for funding for the race. In response, Bank of America selected me from more than 20,000 employees to carry the Olympic torch during the torch relay in New York.

In 2005, Laurie established the Lung Cancer Research Foundation to raise funds for critical scientific research. I was in my element – ready to support this new organization that was so desperately needed. Then, in June of that year, the unexpected happened. Four months shy of my five year remission mark, I went in for a check-up and my doctor found a spot on my lung. During a subsequent scan, he also noticed something on my right breast. The whirlwind of testing began again and revealed that I had lung cancer and stage III breast cancer HER 2 receptive. I had just had my mammogram in May – how could this be?

I was stunned yet still determined. That year, I postponed my lung surgery a day so that I could walk in *Strides for Life*. Two months later, I had a mastectomy. These were two separate cancers, not a spread. I was lucky.

During chemotherapy, I mixed things up and wore Halloween wigs to every treatment. My catch phrase became "good morning, it is 92 and sunny." People thought that I was nutty but I saw their smiles. The doctors and nurses said that my crazy wigs and positive attitude gave the other patients encouragement and they asked me to be a guest speaker at their special cancer survivor's day. The theme was celebration. This was excellent I thought; I celebrate every single day.

In June 2007, during a routine x-ray, the doctors discovered another nodule in the remaining half of my upper right lobe. This caused a serious dilemma; my daughter was getting married in September and I absolutely had to be there. I talked to my doctors and scheduled my fourth lung surgery four days after the wedding. And what a wedding that was. That was one heck of a celebration.

Today, I am 54 and so far cancer free. People always tell me that I am strong to have survived so much. I believe it is faith and determination that will get you through anything. No matter how hard it is going to be, you have to believe. Believe in yourself and believe in the people around you.

When people ask, "what should I do?" I tell them to be assertive about their treatment. You need to ask a lot of questions. Become involved with your treatment. Also, become involved with an organization like LCRF. My reality is *Strides for Life*. That is my focus. I am still recovering from all the surgeries but I make it a point to be there every August for the walk. This year, I started "Lorette's Team" and was so proud to see my family and friends wearing shirts in my favorite color, orange. I walk for my family, for all of us in the fight against lung cancer, and for the hope that one day soon, through funding pioneering new research projects, we will find a cure for this deadly disease.





LUNG CANCER RESEARCH FOUNDATION

Dedicated to *Discovery*
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THE FOUNDATION: OUR MISSION

The mission of the Lung Cancer Research Foundation is to support national research studies and activities focused on developing innovative strategies for better treatments, screening, and prevention of all cancers of the lung. New knowledge gained by funding scientific and clinical research initiatives will lead to more positive outcomes and improved quality of life for all lung cancer patients.

LCRF is a 501(c)(3) organization and all contributions are fully tax-deductible. Your gift will advance our mission to support lung cancer research. Donations can be made via credit card on our website, or by calling our office at 212.332.4403. Checks can be made payable to:

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