LUNGevity-funded Lung Cancer Research Tops $14 Million with Addition of New Career Development Awards

In 2002, the year LUNGevity first began funding scientific research, the grants totaled just $20,000. Ten years later, in 2012 alone, LUNGevity paid out $3 million in research funds, bringing the total for LUNGevity-funded research projects to more than $14 million.

The $3 million includes renewed funding for 11 existing projects under the Early Detection and Targeted Therapies Awards Programs as well as funding for five new Career Development Awards (CDAs) for Translational Research. The goals of the newly-established CDA program are to identify, retain and advance the careers of talented future research leaders who will keep the field of lung cancer research vibrant with new ideas. Awardees participate in a structured mentoring program at their institutions and become non-voting members of LUNGevity’s Scientific Advisory Board for the three-year duration of the award.

To read more about our awardees, please turn to page 5.

LUNGevity has funded 92 research projects at 54 institutions in 23 states, focusing on early detection and more effective treatments of lung cancer.
Award-Winning Journalist and Survivor Lends Her Voice to Lung Cancer Awareness

LUNGevity honored Greta Kreuz, lung cancer survivor and award-winning reporter and anchor for ABC7/WJLA-TV, along with NBC News4 Chief Meteorologist Doug Kammerer and W*USA 9 NEWS NOW Morning co-anchor Andrea Roane, with its Raising Hope Award at its annual Musical Celebration of Hope Gala in Washington, DC. Greta discovered she had stage I lung cancer through a combination of awareness about her own health and luck. The discomfort in her upper chest she mentioned during a routine physical turned out to be a muscle pull, but the x-ray taken by her physician revealed lung cancer elsewhere. Greta was treated with surgery, and feels she is remarkably lucky.

She could easily have kept her lung cancer to herself and gone on with her life as newswoman, active community member and mother of two, but she chose to go public to help raise awareness that lung cancer has many faces. For one thing, the glamorous journalist, like 20,000 to 30,000 others diagnosed this year, was a never-smoker. Having covered a wide variety of beats for her work, including education, transportation and religion, she has now added lung cancer survivor and advocate to her profile. Thank you, Greta, for raising awareness that anyone can get lung cancer and confirming the importance of LUNGevity’s dedication to continued investment in early detection, so finding lung cancer early stops being left to chance and becomes part of regular healthcare.

BOARD OF DIRECTORS

Susan Bersh, Secretary
Andrea Ferris, Chairman and President
Craig Lerner
Jerome Sorkin, Vice Chairman
Alexander Stern
Andrew Stern
Paul G. Stern
Jason Swanson, Treasurer
Marc Swerdlow

SCIENTIFIC ADVISORY BOARD

Denise R. Aberle, MD
David Geffen School of Medicine at UCLA
Nasser K. Altorki, MB, BCh
NewYork Presbyterian-Weill Cornell Medical Center
Philip D. Bonomi, MD
Rush University Medical Center
David P. Carbone, MD, PhD
Ohio State University
Martin “Mac” Cheever, MD
Fred Hutchinson Cancer Research Center
Steven M. Dubinett, MD
David Geffen School of Medicine at UCLA
James R. Jett, MD
National Jewish Health
Robert L. Keith, MD
University of Colorado, Denver
Denver VAMC
J. Jack Lee, MD, PhD
MD Anderson Cancer Center
Scott M. Lippman, MD
University of California, San Diego
Pierre Massion, MD
Vanderbilt-Ingram Cancer Center
Charles Rudin, MD, PhD
Johns Hopkins University
Lawrence H. Schwartz, MD
NewYork-Presbyterian/Columbia University Medical Center
Lecia V. Sequist, MD, MPH
Massachusetts General Hospital Cancer Center
Steven J. Skates, PhD
Harvard Medical School and Massachusetts General Hospital
Avrum E. Spira, MD, MSci
Boston University
Margaret R. Spitz, MD, MPH
Baylor College of Medicine
Twelve-year survivor Alisa Brenes described the feeling of many in the room when she said, “To be at the Hope Summit is really overwhelming to me... the whole room knows what you’re going through; it’s unspoken that we all get each other, and that’s a beautiful thing.”

Another important goal was educating and empowering survivors for navigating their own lung cancer journey, as well as for speaking out to raise awareness and represent the many human faces of this disease. Speakers represented a range of experiences and backgrounds and included lung cancer survivors, caregivers, health care providers, and even breast cancer survivors who advocate on behalf of lung cancer patients. The program was geared toward issues that specifically affect those who have or have had lung cancer and included advances in lung cancer research, pulmonary rehabilitation, communicating with your caregivers, managing your medical team, living with lung cancer, and life after lung cancer.

Friendships begun online through LUNGevity’s Lung Cancer Support Community were cemented in person, and new friendships were forged by those new to LUNGevity and other lung cancer survivors altogether. Plans are already underway for Hope Summit 2013, where we hope to have an even bigger community of survivors in one place. Stay tuned!

Lung cancer survivors of all ages and stages of diagnosis converged on the Washington, DC, area this past May for the Hope Summit. First and foremost, the weekend-long program was focused on celebrating survivorship and creating a sense of community for those affected by a disease that can too often be isolating.

Musical Celebration of Hope Gala Raises $640,000

The Latin-themed Musical Celebration of Hope LUNGevity gala in Washington, DC, raised $640,000, thanks to more than 300 generous guests and sponsors from all walks of life. California Congresswoman Lois Capps was recognized with The Face of Hope Award for her tireless efforts to elevate awareness about lung cancer and change health policy. The 2012 Raising Hope Award was presented jointly to NBC News4 Chief Meteorologist Doug Kammerer; ABC7/WJLA-TV reporter and anchor and lung cancer survivor Greta Kreuz; and WUSA 9 NEWS NOW co-anchor Andrea Roane for their tireless efforts to elevate awareness of lung cancer.
The Importance Of Supporting Early-Career Researchers

This year, five exceptional early-career researchers with interests in lung cancer have earned Career Development Awards (CDAs) from LUNGevity. We spoke with the chairman of LUNGevity’s Scientific Advisory Board, Dr. Pierre Massion of the Vanderbilt-Ingram Cancer Center, to understand why these awards are so important and how they position researchers for lifelong careers dedicated to helping lung cancer patients.

LUNGevity Foundation: How is LUNGevity helping early-career researchers develop into world-class lung cancer experts?

Dr. Pierre Massion: LUNGevity has carefully selected the most promising scientists to invest in. There are so many researchers hungry for funding. LUNGevity selected five out of 55 initial applicants. The criteria are stringent. Being smart isn’t enough. These researchers must also be creative, determined, well-trained, curious and passionate. These seedling-scientists also need solid infrastructure and financial support in order for them to grow and thrive. That is why LUNGevity requires that these researchers have a detailed mentorship plan. In return, awardees serve as non-voting members on LUNGevity’s Scientific Advisory Board.

LF: Why is the requirement for serving as ex officio or non-voting Scientific Advisory Board members appealing to early-career investigators?

Dr. M: It integrates early-career researchers into a community of established lung cancer investigators. Plus, it allows them to build a reputation, to present at meetings and to develop a network. Building a network is key, because translational and clinical research in particular are increasingly collaborative. Often the researchers are not even at the same institution. By networking, you can talk to colleagues and realize the network can help test a hypothesis using its expertise and do it more quickly, cheaply and efficiently than you can in isolation.

LF: What is the process for earning a stable faculty position and conducting research?

Dr. M: People used to say that the golden rule for successful researchers was ‘publish or perish’ but now it’s more like ‘publish and get grants, or perish.’

When early-career researchers get their first faculty position, their departments will often support their research costs for the first three years. But the best faculty positions go to early-career researchers who have already been awarded grant money. If early-career researchers don’t have career development grants and if their departments can’t support them, the researchers split their time between conducting research and teaching students. Grants like LUNGevity’s CDAs help protect their research time. These grants ensure that the majority of their time can be spent in the lab, working on projects and publishing papers to share their findings.

In the best-case scenario, their career development grants have given them enough lab time to make significant progress in their research and they have earned one or more large five-year grants from the NIH so they can build on their progress in lung cancer research.

LF: Fast-forward five or ten years, how will you know these Career Development Awards were successful?

Dr. M: On an individual level, the award should be a springboard for these five researchers. We’d like to see them continuing their careers in lung cancer research, climbing the academic ladder, leading their own laboratories and conducting independent work. We hope that they continue to be passionate about their research and they take opportunities to share their work with other scientists and the community at large.

On a scientific level, the hope is that these five studies will generate further interest and develop deeper insights into lung cancer. We hope the projects will lead to publications, but we do not want the projects to stop there. We want the ideas to progress and contribute to the knowledge base of lung cancer biology and translation to patient care and help us further our understanding of prevention, diagnosis and treatment. These five early-career investigators should help strengthen the lung cancer field. They should help us fight to end lung cancer mortality.

Recognizing the value of LUNGevity’s Science Program, the following Partners-in-Research have joined with us this year to fund potentially life-saving research: Genentech, Thomas G. Labrecque Foundation, A Breath of Hope Lung Foundation, Janice McArdle Cancer Research Foundation, and Upstage Lung Cancer. Learn how you can become a Partner-in-Research by contacting Beth Westbrook at 240-454-3100 x115.
2012 Career Development Awardees

LUNGevity is proud to introduce the five exceptional young scientists presented with LUNGevity Career Development Awards (CDAs) to support their translational research into early detection and targeted therapeutics for lung cancer. The current and future work of these talented researchers will help ensure continued progress in fighting lung cancer. Special thanks to Genentech for their support of the LUNGevity Career Development Awards Program.

Jennifer Beane, PhD
Boston University, Boston, MA
“Biomarkers of pre-malignant disease progression for lung cancer detection”

Dr. Beane’s goal is to better understand the inner workings of lung cancer in order to improve the outcomes of chemopreventive therapies in high-risk patients. To do so, she is using next-generation sequencing to measure molecular changes in pre-cancerous airway epithelial cells obtained through bronchoscopy, combined with computational approaches to identify key changes that predict if the pre-cancerous lesions will progress or regress. This information will help to select patients to enroll in chemoprevention trials, to determine which patients are benefitting from treatment, and to identify new targets for chemopreventive therapies. In addition, Dr. Beane will test the correlation between these key airway changes and the development of lung cancer. Success in identifying these critical changes will help lay the groundwork for the early detection and possible prevention of lung cancer.

Lauren Byers, MD
University of Texas MD Anderson Cancer Center, Houston, TX
“PARP1 as a novel therapeutic target in small cell lung cancer”

Awarded with support from A Breath of Hope Lung Foundation and the Janice McArdle Cancer Research Foundation

Dr. Byers is building on her discovery that patients with small cell lung cancer (SCLC) have an over-abundance of a specific protein, called PARP1, which helps repair damaged DNA. She has also shown that adding a drug that stops PARP1 from working could kill SCLC cells in the laboratory and that the drug improves the activity of chemotherapy drugs that work by causing DNA damage. To translate these findings into the treatment setting, she is assembling a Phase II clinical trial in SCLC patients to evaluate the combination of this PARP1 inhibitor drug with chemotherapy. The LUNGevity grant allows Dr. Byers to use data and samples collected from this clinical trial to discover biomarkers to identify the patients most likely to benefit from this treatment and to continue defining the sensitivity of SCLC to the PARP1 inhibitor drug with and without chemotherapy. With these additional studies, Dr. Byers is moving toward using PARP inhibitor drugs to more effectively treat SCLC using a personalized approach.

Mohamed Hassanein, PhD
Vanderbilt University Medical Center, Nashville, TN
“Developing new non-invasive methods for the diagnosis of lung cancer”

Awarded with support from the Janice McArdle Cancer Research Foundation

Dr. Hassanein is working to develop a blood test to help physicians identify early-stage lung cancer. By studying tissue samples from stage I lung cancer patients, his team has identified 164 proteins that are only found in the lung cancer patients and not in the control group of people without lung cancer. Dr. Hassanein is studying these proteins closely in order to use them as biomarkers in the early detection of lung cancer. Notably, he is developing a method of testing the patients’ blood for its own antibodies to these biomarker proteins, instead of directly for the biomarker proteins themselves. Ultimately, he hopes this will lead to a blood test to find lung cancer in its earliest, most treatable stage.

Christopher A. Maher, PhD
Washington University in St. Louis, St. Louis, MO
“Molecular predictors of outcome in non-small cell lung cancer”

Recipient of LUNGevity Foundation’s Melissa Lumberg Zagon Founders’ Award

Dr. Maher is working on improving the accuracy and usability of tests that identify lung cancer patients who are likely to relapse, using new computational strategies to detect key genetic changes. Previously, scientists identified a signature set of genetic changes in lung cancer patients that indicates an increased risk of lung cancer relapse. By identifying patients who are likely (and unlikely) to relapse, the scientists were developing a test to help physicians personalize treatment plans to account for relapse risk. Dr. Maher is wielding next-generation sequencing techniques to improve the accuracy of this signature set of genetic changes and convert it into a clinical test to make it easier for hospitals and physicians to screen for these changes. By identifying the key changes and ensuring the testing methods are user-friendly for hospitals, Dr. Maher hopes to be laying the groundwork for an improved test that could be widely adopted by hospitals to determine patients’ risk of lung cancer relapse.

Viswam S. Nair, MD
Stanford University, Stanford, CA
“In-vivo and in-vitro diagnostics to improve lung cancer care”

Dr. Nair is developing a blood test to help physicians determine if a pulmonary nodule seen on an imaging scan is cancerous. When developing a treatment plan for patients with a pulmonary nodule, many physicians will request a PET-scan to study the metabolism of the lung nodule and help determine if the nodule is malignant. However, even after a PET-scan the diagnosis is not always accurate. To alleviate the cost and risks associated with improper diagnosis, Dr. Nair is developing a blood test to be used in conjunction with PET-scans to accurately diagnose patients with pulmonary nodules. By conducting this work, Dr. Nair is taking steps toward his goal of making a difference in the lives of people with lung cancer. By wielding new technologies and integrating existing technologies, he aims to improve the quality of care for lung cancer patients.
Make A Difference Through Your Workplace

You can make a difference, right where you work. Many employers offer the convenience of giving through payroll deductions, while many more will go a step further and match your generosity with a gift of their own. Ask your employer if they participate in a workplace giving program and explore the list to see if LUNGevity is one of the organizations they support. If not, talk with Human Resources and determine how LUNGevity can be added as a participant. Be sure to also ask your employer if they have a Matching Gift Fund and ask them to match your gift to LUNGevity Foundation.

Federal employees can give through the Combined Federal Campaigns, or CFC. LUNGevity Foundation’s CFC # is 12970.

ASK THE EXPERTS
ABOUT LUNG CANCER

Learn about the latest developments in lung cancer research and care on LUNGevity’s website at Ask the Experts. Ask questions on the online message board, read the weekly blog, or sign up online for the monthly webinars at www.LUNGevity.org/AskTheExperts.

The field of lung cancer is complex and changing rapidly, and usually described in medically-complex language most of us don’t understand. Recognizing the importance of providing easy-to-understand and medically-accurate information about lung cancer, LUNGevity formed a long-term partnership with the medical experts at Global Resource for Advancing Cancer Education (GRACE) to provide these helpful resources.

The next two webinars will be:

**Advances in Surgery for Lung Cancer**
Wednesday, October 24,
3:30 PM Pacific/6:30 PM Eastern
Dr. David Harpole, Duke University Medical Center

**Molecular Signatures to Assess Prognosis in Early Stage Lung Cancer**
Dr. Johannes Kratz, Massachusetts General Hospital

If you can’t join live, you can download the podcasts or transcripts of past webinars on many timely topics, including these and more:

**2011 Highlights in Lung Cancer**
Dr. Jared Weiss, Lineberger Cancer Center at the University of North Carolina at Chapel Hill

**Molecular Markers in Advanced NSCLC: Who to Test and What to Test For**
panel discussion hosted by Dr. Jack West with Dr. Alice Shaw, Massachusetts General Hospital; Dr. Charlie Rudin, Johns Hopkins University; Dr. David Spigel, Sarah Cannon Cancer Center; and Dr. Glen Goss, University of Ottawa, Ottawa, ON

**Immunotherapies for Lung Cancer: Can We Deliver on the Promise?**
Dr. Ramaswamy Govindan, Washington University in St. Louis and Dr. Julie Brahmer, Sidney Kimmel Cancer Center at Johns Hopkins University

**Symptom Management and Palliative Care in People with Lung Cancer**
Dr. Stephanie Harman, Stanford University

**Managing Pulmonary Complications in Lung Cancer**
Dr. Gerard Silvestri, Medical University of South Carolina

**American Society for Clinical Oncology (ASCO) Annual Meeting Highlights**
Dr. Joel Neal, Stanford University and Dr. Mark Socinski, University of Pittsburgh

**New Radiation Techniques for Lung Cancer**
Dr. Vivek Mehta, Swedish Cancer Institute, Seattle, WA

**Molecular Pathology in Lung Cancer**
Dr. Dara Aisner, University of Colorado

**Practical Aspects of Clinical Trials in Cancer: Myths and Facts**
Dr. Suresh Ramalingam, Winship Cancer Center at Emory University
Join One of Our Fall Events to Raise Awareness and Funds for Lung Cancer Research

Over 75 events across the nation will benefit LUNGevity Foundation in 2012, raising both much-needed awareness and funds for lung cancer research.

A busy fall is still ahead, with over two dozen events taking place this October and November alone. They include our signature Breathe Deep walks and runs from San Diego to New York City and all points in-between; Chicago’s annual Fall Benefit: “One Voice, One Hope” on November 3; and other memorable and fun events across the country.

See if there’s an event planned in your area, or contact us about starting one for 2013—it’s just around the corner!

<table>
<thead>
<tr>
<th>DATE</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 7</td>
<td>Bank of America Chicago Marathon — Team LUNGevity</td>
<td>Chicago, IL</td>
</tr>
<tr>
<td>October 7</td>
<td>Breathe Deep Cary</td>
<td>Cary, NC</td>
</tr>
<tr>
<td>October 14</td>
<td>Breathe Deep Westport</td>
<td>Westport, CT</td>
</tr>
<tr>
<td>October 15</td>
<td>Suzi Carmassi Golf Classic</td>
<td>Ijamsville, MD</td>
</tr>
<tr>
<td>October 21</td>
<td>Breathe Deep NYC</td>
<td>New York, NY</td>
</tr>
<tr>
<td>October 28</td>
<td>Breathe Deep Phoenix</td>
<td>Tempe, AZ</td>
</tr>
<tr>
<td>October 28</td>
<td>Labrecque-LUNGevity Run as One Marine Corps Marathon — Team Run as One</td>
<td>Washington, DC</td>
</tr>
<tr>
<td>November 3</td>
<td>Breathe Deep Boston 5K Walk</td>
<td>S. Boston, MA</td>
</tr>
<tr>
<td>November 3</td>
<td>Breathe Deep Central Illinois 5K Run and Walk</td>
<td>Bloomington, IL</td>
</tr>
<tr>
<td>November 3</td>
<td>Breathe Deep Naperville</td>
<td>Naperville, IL</td>
</tr>
<tr>
<td>November 3</td>
<td>Breathe Deep New Hampshire</td>
<td>Concord, NH</td>
</tr>
<tr>
<td>November 3</td>
<td>Breathe Deep Pompano Beach</td>
<td>Pompano Beach, FL</td>
</tr>
<tr>
<td>November 3</td>
<td>Heather Saler 9th Annual Lung Cancer Walk</td>
<td>Pennsauken, NJ</td>
</tr>
<tr>
<td>November 3</td>
<td>LUNGevity Annual Fall Benefit: One Voice, One Hope</td>
<td>Chicago, IL</td>
</tr>
<tr>
<td>November 4</td>
<td>Breathe Deep DC</td>
<td>Washington, DC</td>
</tr>
<tr>
<td>November 4</td>
<td>Labrecque-LUNGevity Run as One ING New York City Marathon — Team Run as One</td>
<td>New York, NY</td>
</tr>
<tr>
<td>November 4</td>
<td>The Lung Hill Run</td>
<td>Kansas City, MO</td>
</tr>
<tr>
<td>November 4</td>
<td>Spare a Life – Strike Out Lung Cancer</td>
<td>Kankakee, IL</td>
</tr>
<tr>
<td>November 10</td>
<td>Breathe Deep Atlanta</td>
<td>Atlanta, GA</td>
</tr>
<tr>
<td>November 10</td>
<td>Breathe Deep Busse Woods</td>
<td>Elk Grove Village, IL</td>
</tr>
<tr>
<td>November 10</td>
<td>Breathe Deep Columbus</td>
<td>Columbus, OH</td>
</tr>
<tr>
<td>November 10</td>
<td>Breathe Deep DFW</td>
<td>Arlington, TX</td>
</tr>
<tr>
<td>November 10</td>
<td>Breathe Deep San Diego</td>
<td>San Diego, CA</td>
</tr>
<tr>
<td>November 10</td>
<td>Breathe Deep Wilmington</td>
<td>Wilmington, NC</td>
</tr>
<tr>
<td>November 11</td>
<td>Every Breath Counts Walk, Run, Survive</td>
<td>Ocean City, NJ</td>
</tr>
<tr>
<td>November 12</td>
<td>Upstage Lung Cancer’s 4th Annual Cabaret Concert, “Unforgettable”</td>
<td>Boston, MA</td>
</tr>
<tr>
<td>November 17</td>
<td>Breathe Deep Nashville</td>
<td>Nashville, TN</td>
</tr>
</tbody>
</table>
Take Action To Mark
Lung Cancer Awareness Month

Lung cancer deserves attention 365 days a year, but November’s Lung Cancer Awareness Month burns brightly when all of us help shine a spotlight on lung cancer. Here are some easy ways to raise awareness:

• Learn the facts about lung cancer and share them with ten new people
• Contact the health editors of your local newspapers about doing a story on lung cancer in November. Share your story along with the lung cancer facts
• Order LUNGevity’s “Get Connected” brochures, describing our educational and support services, and ask your nurse, doctor or social worker to place them in the reception or infusion or educational areas of your hospital
• Share your experience in a LUNGevity blog
• Suggest that employees at your company have a “Pay $5 to wear jeans to work Friday” to raise awareness and funds for lung cancer research at your office