

A Beacon of HOPE

Cancer research
and treatment is
getting more
attention here
thanks to angels
of hope.

any given day in the United States, there are 11 million people battling cancer.

EACH YEAR, more than 500,000 of them lose their battle. The big 'C' is gaining ground. While every cancer diagnosis is ugly, the even uglier truth is that for those fighting its deadliest forms, such as pancreatic, brain and ovarian, treatment progress over the past several decades has slowed. Since these cancers see fewer successes and higher mortality rates, there are fewer patients to advocate for better therapies, while attracting little attention from drug developers. However, one non-profit foundation in the heart of Newport is working against the odds to transform the way these cancers are studied and treated. Hope Funds for Cancer Research, the brainchild of Leah Cann and a unique group of individuals with backgrounds ranging from basic science and oncology, to intellectual property law, investment banking, philanthropy, sociology and the arts, is paving the way for a different big 'C' – change.

Celebrating its 10th anniversary in 2016, Hope Funds was created with two equally important goals: to develop innovative methods of cancer detection and treatment, as well as connect the cancer field's brightest young minds with seasoned mentors. "[We] were seeing that cancers with successes got the bulk of the research dollars. We wanted to start a foundation that changed that and funded these less-looked-at cancers," says Cann, chairwoman of the board's executive committee. She herself worked in scientific research and analysis for a number of corporations and on Wall Street since 1992, so starting a non-profit to target these overlooked elements of the cancer field was a win-win. "We had a simple objective in mind other than the research;



TOP TO BOTTOM: Leah Cann, co-founder and chairwoman of the board's executive committee; Hope Funds Fellow Dr. Bluma Lesch; supporter Mrs. Robert Parks; former board member Dr. James Holland; chairman of the Scientific Advisory Council Dr. Bryan Williams; former board member Jackie Egan; board chairman Dr. Malcolm Moore; Dr. Sohil Tavazoie, a scientific advisory board member and mentor to a Hope Funds fellow.

Courtesy of Hope Funds for Cancer Research

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CHANGE.

take young people starting out and have them interact with one another professionally and socially. This led to bigger collaborations ... keeping younger minds open to the late career luminaries that have already accomplished so much."

For one of the first recipients of the Hope Funds' fellowships, Nathan Robison, MD, this approach was hugely successful. "In this age of incredible science and technology, Hope Funds is taking people who have ideas, ingenuity and creativity, and helping them to make a difference in their careers," he says. "Essentially, they are making the future of cancer research possible."

Robison is now a pediatric neuro oncologist at Children's Hospital Los Angeles and assistant professor at the University of Southern California.

Recognized for his work involving novel approaches to childhood brain tumors that receive poor prognoses, he first discovered that certain tumors, specifically medulloblastoma, could be targeted by using specific MRI techniques. "Typically radiation is used with chemotherapy to treat these types of tumors, however, the survival rate is low. If a child is younger than seven, radiation causes significant brain damage," he explains. "While radiation helps survival, the cost is very high." Thanks to his Hope Funds fellowship, he examined groups of patients that did well without radiation and he identified the molecular feature to see if another patient is a good candidate for similar non-radiation treatment. "I recently had a five-year-old patient who would have traditionally received radiation, but we were able to see she ... did not need [it]," recalls Robison. "This change in treatment will make a big difference in her life and

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What is MEDULLOBLASTOMA?
It is the most common type of pediatric malignant brain tumor, originating in the part of the brain that is toward the back and the bottom of the skull.

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greatly lessen the negative effects to her cognitive abilities.”

Hope Funds fellows also examine genes, specifically epigenetics, as is the case with Bluma Lesch, MD, Ph.D. Lesch was awarded a fellowship in 2013 to study patients with myeloid and lymphoid leukemias, hoping to genetically predict these types of cancers in individuals with a family history. “The possibility that inherited epigenetic defects contribute to familial cancer risk had not been seriously examined until my fellowship. I have made some interesting discoveries so far and hope that 10 years from now, we can test patients for hereditary markers and know exactly what to watch for,” says Lesch. “Knowing that you carry a particular [genetic] mutation can indicate the importance of going for screenings, and understanding how a disease is inherited is the first step in diagnosing and deciding how we treat.”

While instrumental in funding her work, Hope Funds also made Lesch more aware of and connected to the cancer community, which she says was priceless. “The foundation and the people have motivated me to continue pushing for cancer treatment and prevention. They taught me how to speak publicly and go against my scientist impulse to stay behind the scenes. I was able to connect with so many scientists, clinicians and others.”

As if the fellows alone are not impressive enough, Hope Funds also recognizes and garners support from many other remarkable individuals working in the medical field. In 2013, the foundation honored James D. Watson who “discovered the structure of DNA in 1953 with Francis Crick and was awarded a Nobel Prize along with other



What is EPIGENETICS?
It is a non-inherited genetic predisposition to disease.

colleagues. His contributions to science can be compared to Newton and Darwin,” says Cann. “We were honored to recognize him as an extraordinary figure in science and welcome him as a member of our Scientific Advisory Council.”

Past honorees include Joan Elaine Argetsinger Steitz, Ph.D., known for her discoveries involving RNA; James F. Holland, MD, who with two other doctors is credited for taking lymphoblastic leukemia in children from incurability to a more than 80 percent survival rate; and Antonio J. Grillo-López, MD, DSc (hc), who supervised the development of Zevalin, the first radioimmunotherapy approved for the treatment of cancer. He’s also now a member of the foundation’s Board of Trustees. “Leah is one of the main reasons my wife and I are involved. The foundation is run like a well-oiled machine,” Grillo-López says. “When people support Hope Funds, they know their money is going

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Robert Bazell,
Hope Funds Board of Trustees

directly to the fellows because there is only four percent overhead, compared to an acceptable 10 to 20 percent. The [American] Cancer Society and the Red Cross can’t even say that.”

Robert Bazell, former NBC Chief Science and Health Correspondent, also sits on the Hope Funds Board of Trustees. “Hope Funds has set an example of how things should be done well,” he shares. “I realized early on that this organization is doing exactly what is necessary in science — bringing together the brightest minds and creating an amazing culture.”

The culture in Rhode Island also has shared in Hope Funds’ success. “While we were initially based here out of convenience, we underestimated the love the scientists would have for the area. Hope Funds has made a huge impact on patient care in Rhode Island, especially in Newport County,” says Cann. “Many young people who have gotten involved with us as volunteers have received local internships in the fields of science and business. That was unanticipated, but amazing.”

After meeting Cann, Alessandro Papa, MD and director of the Comprehensive Cancer Center at Newport Hospital, says he was “immediately hooked.” “I am so impressed with the people [she] has connected with and the way she has managed to raise awareness for tough cancer research,” he says. “The best of the best in the medical field are involved. It blows my mind that I can look out the window of my Newport office and see that this work emanates from Rhode Island. ... I see the research from current fellows and it gives me the hope to persevere for my patients. It helps me give them faith that newer and better treatments are coming.”

Indeed, Cann is full of hope for the future. “This is a natural time of reflection as we come upon ten years. We are looking at what we have accomplished, what we want to accomplish and where we are headed. But above all, we are proud to say that our initial principles still hold true.” 🍀