



## Message from Cristy

Dr. Randall Lambrecht and Cristy Garcia-Thomas at Discovery Laboratory, located inside Aurora Research Institute on the Aurora Sinai Medical Center campus in Milwaukee.



When you think of medical research, you probably think of test tubes, petri dishes and white lab coats. What you may not think of right away are patients. But our Aurora Research Institute is entirely patient-centered, with its bench and clinical research intended to create successful treatments that are also respectful of individual patient preferences and values.

Patient-centered research is a cornerstone of Aurora Health Care. So much so, this year's Aurora Gala will celebrate and benefit our research and innovation efforts. So for this issue, I wanted to talk with Randall Lambrecht, PhD, president of Aurora Research Institute, about how Aurora transforms innovative research into extraordinary patient care.

*Please join us for this exciting celebration on September 23!*

Always,

A handwritten signature in black ink that reads "Cristy Garcia-Thomas".

Cristy Garcia-Thomas  
Chief Diversity and Inclusion Officer, Aurora Health Care,  
and President, Aurora Health Care Foundation

### How does research at Aurora translate into better care for our patients?

The transcatheter aortic valve replacement, or TAVR, procedure is an example of many success stories where we have translated innovative research into best patient care. TAVR provides a less invasive alternative to open heart surgery. Aurora was the first in the state to engage in the TAVR research trial. If you talk to patients who benefitted from it, their whole lives have changed. We celebrated our 1,000th TAVR in 2016.

### How is Aurora impacting the field of research, on a national or international level?

Our clinicians and scientists publish impactful manuscripts every day. We are known for translating that research into patient care on a time frame that is faster than what you might see at a university or academic medical center. I think that our innovative expertise draws patients here. We are a destination for patients looking for hope.

### What are you most proud of?

The people I work with every day—they are so passionate about what they do and are constantly thinking of new ways to do things. I am so proud of how Aurora has supported research and sees it as an important part of clinical care.

### How do donors to Aurora Health Care Foundation impact the work you do?

We couldn't do what we do without support from the Foundation, grateful patients and others who want to see medicine advance. I feel a responsibility every day to steward those gifts so they lead to translatable research and improved standards of care that help someone in need.

*At this year's Aurora Gala, we are excited to honor Stanley Kritzik for his lifetime of visionary leadership and dedication to Aurora Health Care. Mr. Kritzik is a past chairman of the Aurora Health Care board of directors and the Aurora Sinai Medical Center board of directors. Stan's strong and forward-looking vision helped shape Aurora, and without his guidance, Aurora would not be the integrated system it is today.*



*"I did encourage Aurora leadership to start strategic planning, to see where health care is going to be in five or more years. Well they took the ball and ran with it," Stan explained. "I'm all for change, and the thing I'm most proud of is planting that seed."*

*The newly established Stanley Kritzik Innovation Fund will help support technology-driven innovation to aid in preventing and ultimately curing diseases impacting the aging, including but not limited to cancer, dementia and heart disease. To learn more, visit [give.aurora.org/auroragala](http://give.aurora.org/auroragala) or contact Meaghan Vilcins at 414-219-4709, or [meaghan.vilcins@aurora.org](mailto:meaghan.vilcins@aurora.org).*

# Lee's amazing recovery could be a signal of what's to come in cancer care

"The doctors at Aurora extended my life. Not only that, they also made it livable."

That wasn't the case just a few years ago for Lee Pinkus of Arkansas. In August 2011, he was diagnosed with nodular melanoma, the most aggressive form of melanoma. The cancer spread, leaving dozens of tumors in his lungs, small intestine and brain.

After a years-long roller coaster ride of operations, cancer treatments, a clinical trial and a second opinion in Illinois, Lee was referred to Aurora St. Luke's Medical Center in January 2014. He was skeptical, but agreed to meet with Amin Kassam, MD, an internationally renowned, board-certified neurosurgeon.

By that time, the swelling in Lee's brain was pretty bad. He was having difficulty walking and talking, and his vision was starting to go in his right eye.

"But Dr. Kassam said, 'I can fix this,'" Lee said. "I've never heard a doctor say that before, only that they'd try."

Dr. Kassam extracted the tumor from Lee's brain in February 2014, removing and reworking his eye socket in order to do so. Despite the complex operation, Lee was on his feet the next day.

"I was fine. I could walk, I could talk, and I could move all my fingers and toes."

But there were still other tumors in Lee's brain, intestines and lungs. For those, he met with neuro-oncologist George Bobustuc, MD, who put him on a "cocktail of medications," which ultimately shrank the tumors until they disappeared—without the need for additional surgery.

One of the drugs Lee took may seem unlikely for cancer treatment: disulfiram, an FDA-approved drug that has been used for decades to treat alcoholism. Disulfiram has been reported to help some cancer patients. Dr. Bobustuc and Santhi Konduri, PhD, scientist with Aurora Research Institute, are leading clinical and basic research efforts on how it, and other existing drugs, might be used for cancer treatment.



Lee Pinkus (left) with his physician, Dr. George Bobustuc, and his dad, Lester.

"So far the treatments have worked almost magically, and I have no reason to believe it won't continue," said Lee. "Everything they've done has worked."

Lee had his most recent checkup with Dr. Bobustuc in April 2017. All of his scans came back clear. Now he's able to scale back on his medications, which is significant because they have serious side effects.

Today, Lee is engaged to be married and trying to get back to life as it was before his diagnosis. But he recognizes the cancer could return at any time, so he will need to come back to Aurora St. Luke's for checkups every few months. It's a small price to pay for getting his life back.

"As dismal as things looked when I got there, they were smiling and saying, 'We got this,'" said Lee. "There's no comparison to the care at Aurora. No one else has ever asked me how I'm feeling after I'm on a new medicine. It was always, 'Take this and we'll see you in a few months.' I'm not sure if I'm the only one who comes to Aurora from far away, but I shouldn't be."

***Hear more about Lee's story at the Aurora Gala on September 23. Buy your tickets now at [give.aurora.org/auroragala](http://give.aurora.org/auroragala).***



Dr. Santhi Konduri is part of a team at Aurora Research Institute that is investigating the effects of disulfiram as part of a combination therapy in breast, brain and pancreatic cancers. "Recently, disulfiram has also shown anti-cancer properties. And when it is combined with chemotherapeutic drugs, we can reduce the dosage of such drugs," explained Dr. Konduri. Reducing the dose will also help decrease unpleasant side effects and cellular/organ damage caused by chemotherapy's toxicity.

## Innovative health care is close to Vivian Sullivan's heart



Tim and Vivian Sullivan

For gala co-chairs Vivian and Tim Sullivan, donating their time and resources to health care research and innovation isn't just something they do to give back to their community. They felt the direct impact when Vivian faced a rare cardiac condition, and the care of Tanvir Bajwa, MD, and his team at Aurora St. Luke's Medical Center helped save her life.

"We learned of Dr. Bajwa 17 years ago, when I was having some cardiac issues," Vivian recalled. "Dr. Bajwa immediately diagnosed me and began treatment. I remain stable and under his care today, and, quite simply, he is one of the best invasive cardiologists in the world."

The Sullivans felt so strongly about the care they received at Aurora, they made a \$1 million commitment to further advance cardiac research and support the cardiac fellowship program.

"This is cutting-edge research that will not only save lives but it will significantly reduce the cost to provide cardiac care in the future," said Tim, who also serves on the Aurora Health Care Board of Directors. "We hope to not only advance this extremely important research with our monetary gift but, more importantly, highlight this important research."

Thanks to the Sullivans' generosity, additional staff has been secured to further Dr. Bajwa's fellowship program and the program has launched a new Sullivan Cardiac Research Award for Residents and Fellows. Plus, an annual lecture series receiving their support has now been renamed in their honor.

"There is nothing more important to us than helping to save or extend human life. To be part of that effort is very gratifying," Vivian shared.

## Giving from the heart and strengthening the future of cardiac care

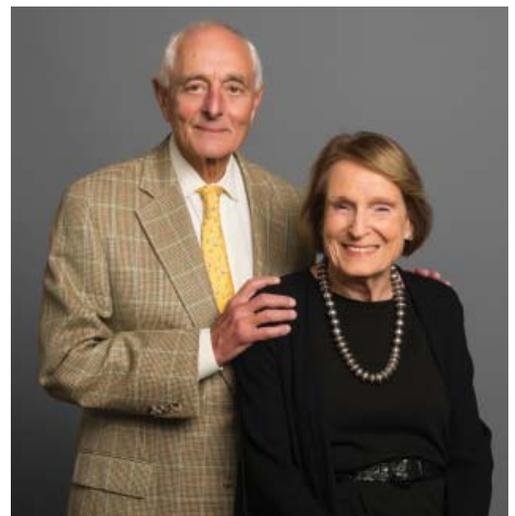
When business leaders and philanthropists Marianne and Sheldon Lubar learned their friend, Stan Kritzik, would be honored at this year's Aurora Gala, they were quick to support by serving as gala co-chairs.

"I've known Stan for more than 70 years," said Sheldon. "He's done so much for Aurora Sinai Medical Center and for Aurora. It was just a heartfelt move reflecting on his energy and wisdom, and he is very deserving of this."

"Stan has always been an innovator," explained Marianne. "But he isn't our only connection to the event, we've been very impressed with the strides Aurora is making in the realm of research."

Nearly a decade ago, Sheldon needed open heart surgery and the Lubars were grateful to have Aurora's innovative medicine and world-class physicians right here at home.

"I did my research and checked out programs across the country, and I found Aurora St. Luke's Medical Center to be the best place to have this type of surgery," said Sheldon. Building on his appreciation for Aurora services, Sheldon serves on the Aurora St. Luke's Steering Council to further our efforts to be the region's leading destination for complex care and medical innovation.



Sheldon and Marianne Lubar

***The theme for this year's Aurora Gala is Transforming Innovative Research into Extraordinary Care. If you would like to learn more or purchase a ticket, go to [give.aurora.org/auroragala](http://give.aurora.org/auroragala).***

## A transformational gift for cardiology research

Dr. Ervin “Erv” Colton and his wife, Beverly, have made several generous gifts in support of cardiac research over the years, but their latest gift of \$1 million will help influence the next generation of cardiology specialists.

The gift created the *Colton Scholar in Cardiology Research in honor of Dr. A. Jamil Tajik*. It supports the hiring of scholars, the best talent and expertise in the field, to study cardiovascular health and spur medical advances. Working with Aurora Research Institute and a team under the leadership of A. Jamil Tajik, MD, scholars will help develop innovative ideas and see them through the stages of implementation and reporting.

Dr. Tajik was Erv’s cardiologist in the last few years of his life. Unfortunately, Erv passed away in October of 2016 at the age of 89. Beverly says Erv was so impressed with Dr. Tajik and his work, he wanted to make sure Dr. Tajik’s research would continue through the scholars he and his colleagues guide and mentor in the years to come.

“Erv was such a quiet, sincere person and often didn’t want to be publicly recognized for his philanthropic support. However, he really enjoyed giving and had amazing confidence in Dr. Tajik,” Beverly said.



Beverly and Dr. Erv Colton at their home in Door County. Beverly says their gift came out of the “great confidence” Erv had in Dr. Tajik and his Aurora physicians.

## Mapping a way to saving lives, lowering costs



Dr. Jasbir Sra collaborates during a procedure in the electrophysiology suite.

When electrophysiologist Jasbir Sra, MD, set out to find a successful and more cost-effective method to treat heart arrhythmias, he was always confident it could be done.

“I honestly never had a doubt it could be done if we were persistent and put together the right team,” he explained.

Aurora Health Care also believed in the idea, as it provided support and financial backing to the project as well. In early 2016, after years of research and hard work, APN Health LLC received clearance from the Food and Drug Administration to market a new three-dimensional cardiac mapping system that could transform the treatment of heart rhythm abnormalities such as atrial fibrillation.

The new system, called Navik 3D™, is the first cardiac mapping system that does not require specialized equipment. It instead uses existing patient monitoring and fluoroscopic imaging systems in hospital labs to identify catheter locations in the heart and create 3D maps of the cardiac chamber of interest. The system reduces cost and complexity of electrophysiology procedures by providing real-time 3D maps from existing fluoro systems available in labs throughout the world, to provide the catheter location in the heart.

“I was hoping to be able to make the mapping procedures more widely available, particularly in the developing world. This will mean more people have access to the very best care possible for heart rhythm disorders,” Dr. Sra shared.

# Revolutionary neuroscience technology worth traveling for

What started as a headache led to a trip from Texas to Wisconsin for the latest innovation in brain surgery.

After many tests, Valerie Johnson, a 36-year-old Austin, Texas resident learned she was suffering from a life-threatening brain bleed. Her local doctor referred her to the Aurora Neuroscience Innovation Institute, or ANII, at Aurora St. Luke's Medical Center because of the leading-edge image-guided surgical technique used there.

Neuroradiologists designed a three-dimensional map of Valerie's brain to plan the safest route for surgeons to take during surgery.

"I could not have done Valerie's surgery two years ago. That's how recent this revolutionary technology is," said Amin Kassam, MD, vice president of neurosciences at Aurora Health Care and founder of ANII.

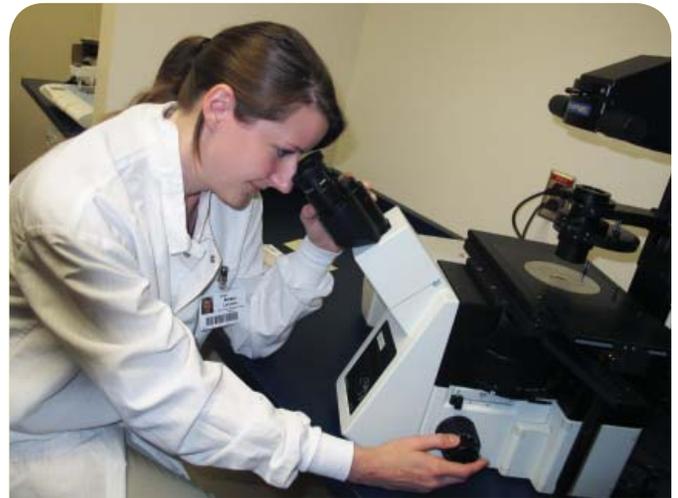
The procedure was a success and Valerie could speak coherently and answer questions, and her motor skills were back to normal.

"The neurosciences team at Aurora was great. They made me feel at ease with the surgery," Valerie said.

The day after her surgery, Valerie left the hospital and joined her family for lunch. She is already getting back into shape and plans to start a business on her own someday.



Valerie with her medical staff at Aurora St. Luke's Medical Center.



Dr. Amber LaCrosse studies the spread of primary tumors to the brain.

## A new way to grow tumors for testing

The spread of cancer to the brain from other primary tumors, such as breast cancer, is occurring more frequently, creating an urgent need to identify the underlying molecular factors and test drugs against those targets.

To find these molecular targets, researchers need to understand how cancer grows and spreads. One model to test this involves growing the tumors in scientifically engineered mouse avatars from human tumor cells.

Postdoctoral fellow Amber LaCrosse, PhD, and a team at Aurora Research Institute determined a potential new way to generate multiple tumor specimens that display the patient's characteristics. They implant the tumor cells through the cerebral aqueduct rather than the traditional method that utilizes the striatum, located toward the center of the brain.

Cells from the first-generation tumors were then used to grow second and third generations of tumors. Testing of the tumor masses confirmed that the third-generation cells retained key characteristics of the original patient tumor.

This new method of implantation may help with the diagnosis and treatment of patients with brain metastases in the future.

Dr. LaCrosse's findings were made possible by a grant from the Vince Lombardi Cancer Foundation, which supports Aurora Cancer Care programs and research.

# Why our patients truly are the research heroes

More than 170,000 Aurora patients have made their leftover biospecimens, including 70,000 whole blood, plasma and serum samples, available for research through Aurora Research Institute's Biorepository and Specimen Research Center, or BSRC. Patients have also donated surgically removed tissue, such as breast and brain tumors, to the BSRC for specific research purposes.

That's a lot of Aurora patients who've agreed to help the institute's patient-centered research. In fact, of those eligible to donate, it's about 60 percent! With Aurora serving 1.2 million patients each year, this means Aurora will have one of the largest and most diverse biorepositories in the world. And that puts Aurora in the position of helping the greatest number of people from all walks of life.

"In Aurora's ongoing commitment to helping people in our communities live well, research is a top priority," said Randall Lambrecht, PhD, president of Aurora Research Institute. "Patients who donate to our biorepository help make this possible."

## How it works

The BSRC is powered by Open-Access Robotic Biorepository and Informatics Technology, or ORBIT. This is an automated library of genetically diverse, de-identified patient specimens that researchers may use in a variety of studies.

Through its partnership with ACL Laboratories, the BSRC accepts hundreds of discarded samples on a daily basis. When a patient agrees to participate, the de-identified samples left over from medical tests are given a barcode. This is where the robot comes in: to ensure patient privacy, the robot assigns the barcode, and matches the sample with the patient's electronic health record. The identifying information is not given to researchers, but when the patient returns to Aurora for care, updates to

All of the biospecimens collected will be used for the study of cancer, heart disease, neurological disorders and other ailments.



the health record provide valuable new information to researchers.

"These real-time updates in patient health are invaluable to the integrity of our research," shared Dr. Lambrecht.

## Helping the greater community

What makes the BSRC stand out is not only its value to Aurora's research; it's also the value it provides to researchers around the world. Hundreds of specimens have been used for studies conducted by Aurora researchers, and thousands more have been shared with investigators throughout the country.

What's more, the large number and diversity of the samples within the biorepository may help speed research, potentially bringing new medications and therapies to patients everywhere — faster and with reduced costs.

"The BSRC serves as an invaluable resource for helping to conduct research and better understand disease processes and potentially discover new therapies," said Dr. Lambrecht. "Our goal is to conduct research that not only treats medical conditions more effectively, but also achieves a person's health goals. That's because our patients are our heroes."

## Research that goes worldwide

In 2014, Aurora Health Care launched Journal of Patient-Centered Research and Reviews, or JPCRR. It's a peer-reviewed, open access medical journal with a unique focus: To advance research and share knowledge of novel health care practices that place the patient above all else.

Since then, journal articles have been downloaded over 50,000 times, with 425 works submitted by scientists from around the world. The common thread, regardless of subject, is to improve the care of individual patients and populations.

*You can take a look at patient-centered research from all over the world at [www.aurora.org/jpcrr](http://www.aurora.org/jpcrr).*



# Inspire

[aurora.org/foundationblog](http://aurora.org/foundationblog)



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## AURORA Gala

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## Calendar of events

Friday  
**August 25**

### Live Well Ozaukee

The Watermark at Shully's, Thiensville  
Go to [give.aurora.org/livewellozaukee](http://give.aurora.org/livewellozaukee)

Saturday  
**September 16**

### Live Well Manitowoc

Capital Civic Centre, Manitowoc  
Go to [give.aurora.org/livewellmanitowoc](http://give.aurora.org/livewellmanitowoc)

Wednesday  
**October 4**

### Evening of Promise

Hampton Inn & Suites, West Allis  
Go to [give.aurora.org/promise](http://give.aurora.org/promise)

Saturday  
**October 14**

### Infinity Ball

Festival Hall, Racine  
Go to [give.aurora.org/infinityball](http://give.aurora.org/infinityball)

Friday  
**October 20**

### Live Well Oshkosh

UW Oshkosh Alumni Welcome Center, Oshkosh  
Go to [give.aurora.org/livewelloshkosh](http://give.aurora.org/livewelloshkosh)

Saturday  
**November 4**

### Lake Country Ball

Milwaukee Marriott West, Waukesha  
Go to [give.aurora.org/lakecountryball](http://give.aurora.org/lakecountryball)

Thursday  
**November 9**

### Tradition of Caring

The Grain Exchange, Milwaukee  
Go to [give.aurora.org/caring](http://give.aurora.org/caring)

## WALK to REMEMBER

Benefitting Aurora Zilber Family Hospice and Home Hospice Care

**Saturday, October 7**  
Walk begins at 9 a.m.  
Hart Park, Wauwatosa

The 3rd Annual Walk to Remember benefitting Aurora Zilber Family Hospice and Home Hospice Care begins and ends at beautiful Hart

Park in Wauwatosa. Join us to honor loved ones and support the uniquely compassionate care offered by Aurora Zilber Family Hospice and Home Hospice Care. Register at [give.aurora.org/walktoremember](http://give.aurora.org/walktoremember).