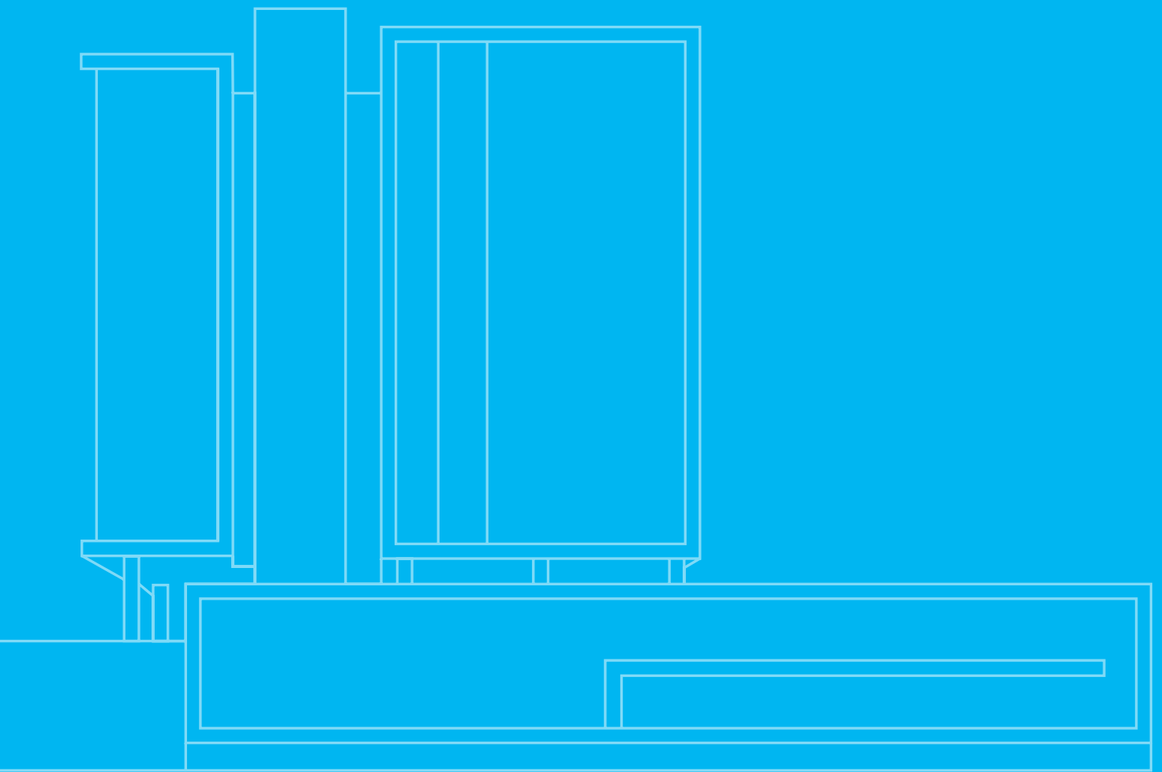
LOUISIANA
CANCER
RESEARCH CENTER

GLOBAL IMPORTANCE. LOCAL IMPACT. 2016 ANNUAL REPORT



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OUR YEAR IN REVIEW:

OUTCOMES OF GLOBAL IMPORTANCE WITH LOCAL IMPACT

It has been an honor to oversee the Louisiana Cancer Research Center in my first full year of leadership. Since first arriving at the LCRC, I remain truly impressed with the scope of work that is accomplished within these walls.

Our partners represent some of the most recognized academics and researchers in the industry, and the outcomes of their hard work continue to grow. Much of the research work of the LCRC is taking its place on the international stage, but we do this by keeping our focus very close to home. Through our unique commitment to the people of Louisiana, our work advances the worldwide effort to reduce cancer's toll on humanity.

As a unique private-public partnership, the LCRC offers an innovative model that informs the way research is conducted and results are delivered. Our work touches many facets of cancer detection, prevention and treatment, as well as bringing cutting edge treatment options to the region. Our combined efforts to identify and combat the effects of cancer right here in Louisiana, particularly among vulnerable populations, are especially inspiring. Much has been accomplished in 2016, and much progress is promised in the years ahead.

The work of the LCRC is at an inflection point. As we look ahead, the future will bring new breakthroughs in the research that is conducted and the practical application of this work. I am proud to announce that it will also bring advances in the LCRC's patient-facing focus, through the introduction of clinical trials space, an onsite patient clinic and our new vivarium. We are excited to move into this new era with new donors and new community partners, and we look forward to welcoming our first patients to this state-of-the-art Louisiana resource.

Look for more information on this new chapter of growth very soon. Until then, I wish all of our partners, staff, donors and friends a happy and healthy New Year.

Sven Davisson
Chief Administrative Officer/Interim CEO

DELIVERING OUTCOMES THAT PUT LOUISIANA FIRST

THE THEME OF THIS ANNUAL REPORT—"GLOBAL IMPORTANCE, LOCAL IMPACT"—HIGHLIGHTS THE CRITICAL NEED THAT IS BEING MET BY THE LCRC. AS CANCER REMAINS A LEADING CAUSE OF DEATH AND SUFFERING WORLDWIDE, THE NEED FOR RESEARCH THAT INFLUENCES HOW CANCER IS PREVENTED, DETECTED AND TREATED IS MORE RELEVANT THAN EVER.

We are meeting this need in all we do. But our research is also focused on Louisiana first—our communities, our families, our citizens. Louisiana has one of the highest cancer incidences among all states, a trend that is even more pronounced in particular communities and geographic regions. Our partnerships create truly unique opportunities to study these regional and demographic influences on cancer, as we all join forces to assure its eradication.

Our partnership model aggregates the research power of leading Louisiana institutions to direct our focus and deliver our results here at home, while creating the research innovations and applications that can have a global impact. The LCRC is putting Louisiana on the map, one Louisiana family at a time.

COMMUNITY FORUM HIGHLIGHTS LCRC'S ROLE IN THE "PROGRESS AND PROMISE AGAINST CANCER"

The Center was honored to host several hundred members of the American Association for Cancer Research (AACR), a national organization that represents leading researchers and academics from across the country. The AACR held its annual conference in New Orleans and partnered with the LCRC to co-host a public forum on cancer research, a part of its ongoing efforts to take science from the lab to real-life applications.

More than 200 members of the community gathered to tour the facility and talk with researchers about cancer research, with an emphasis on prevention, clinical trials and immunotherapy. Local researchers joined experts from other parts of the country to deliver panel discussions and field questions from the audience. The forum, titled "Progress and Promise Against Cancer," was one of many community education and partnership events the LCRC hopes to host in New Orleans.

Nancy Davidson, MD, President of the AACR and director of the University of Pittsburgh Cancer Institute, who moderated the discussions, echoed the philosophy of the LCRC in her opening remarks to the public: "We wanted to take this as an opportunity to partner with you to think about what's going on in cancer research."

SHOPPING AND SOCIALIZING FOR A CANCER-FREE LOUISIANA

Saks Fifth Avenue at Canal Place in New Orleans once again hosted Key to the Cure, a four-day charity shopping event that benefitted the combined cancer research efforts of the LCRC and its partners. The event began with a cocktail reception on Wednesday, October 26, kicking off a weekend of fashion, food and music—all for a good cause.

Throughout the weekend, Saks Fifth Avenue New Orleans donated 2% of all sales to the LCRC and its efforts to raise awareness about the effects of cancer on Louisiana families. Over the past few years, Saks Stores nationwide have raised over $36 million for cancer charities through Key to the Cure, of which $2,000,000 has directly benefitted Louisiana communities.

NEW SMOKE-FREE ORDINANCE IN LOUISIANA

The Bogalusa City Council unanimously passed a comprehensive smoke-free ordinance in December 2016, making Bogalusa the tenth city in Louisiana to adopt an ordinance stronger than the state law. The ordinance was favorably received, owing in part to the work of Tobacco Free Louisiana (TFL) regional volunteers and the support of Councilwoman Kates.

THANK YOU TO OUR GENEROUS DONORS

SPECIAL THANKS TO THE MILTON H. LATTER EDUCATIONAL AND CHARITABLE FOUNDATION AND THE THE MARIE LUNDIN CANCER RESEARCH TRUST FOR THEIR GENEROUS SUPPORT OF THE LCRC. BOTH ORGANIZATIONS MADE SIGNIFICANT CONTRIBUTIONS TO SUPPORT THE WORK OF THE CENTER IN 2016, KICKING OFF BRIGHT PROSPECTS FOR FURTHER FUNDRAISING IN THE COMING YEARS.

UTILIZING GENETIC TESTING TO GUIDE PROSTATE CANCER CARE

Oliver Sartor, M.D., medical director of the Tulane Cancer Center, is leading an exciting new program in the field of cancer genetics related to prostate cancer. The potential therapeutic impact of cancer genetics has been evolving rapidly over the last decade, with the last several years in particular having seen knowledge of genetic alterations more broadly inform the clinician's therapeutic decision-making.

"In our field, we have had an interesting confluence of events, particularly as it relates to alterations in DNA repair," said Sartor, the newly appointed assistant dean for oncology at Tulane University School of Medicine. "There are several recent studies that have led to implications for prostate cancer treatment. The first and most impactful, published in March of last year, revealed that a high percentage of patients enrolled—over 20%—had in their cancer a DNA repair defect, predominately in genes not previously associated with prostate cancer. Even more surprising was that a number of these defects— a larger number than anticipated— actually resulted from inherited DNA, not mutations occurring in the tumor itself. This has come into more general focus in an August 2016 *New England Journal of Medicine* article that demonstrated that almost 12% of people with advanced prostate cancer have an inherited DNA repair defect."

These mutations have both therapeutic and family implications. You have a 50% chance of inheriting these genes if your mother or father carries a defect. And if you have children, 50% of your children can receive this gene, if you have copies. The implications of a specific DNA repair defect vary according to sex, with varying degrees of increased risk for breast, ovarian, pancreatic, prostate and other cancers.

"Starting about two years ago, as these findings were beginning to be discussed, we created a position here at Tulane called Family Studies Coordinator," said Sartor. This person was in charge of insuring that family histories were complete for all of Dr. Sartor's patients and that genetic testing was performed on those who met insurance guidelines. Dr. Sartor's team also worked in collaboration with Diptasri Mondal, Ph.D., professor of genetics at LSU on this project. "We collected 535 family histories in our clinic through September 2016, and we now have one of the most complete family history data sets for prostate cancer patients that I'm aware of."

Out of the 535 histories collected, 28% of Dr. Sartor's patients have breast cancer in their family, 15% colorectal cancer, and 7.5% pancreatic. Genetic testing was performed on 156 of these patients and revealed that 27 of them—almost 17%—had some type of genetic defect detected, each with an implication for not only the patient but their family members as well.

"For example, there was a patient who saw me for a second opinion after initiating treatment at M.D. Anderson," said Sartor. "We did a family history on him and it was immediately obvious that something was going on. He had never been genetically tested despite being in Houston for a time. We ran his genetics and found he had a p53 mutation— a rare defect that was unequivocally associated with multiple cancers. We recommended his children be tested and one of them tested positive as a carrier of the gene. That child is now under a monitoring program for early cancer detection, which provides the best chance for a favorable outcome."

Because of genetic testing, Dr. Sartor and his team were able to define a risk for this family of which they were previously unaware. "Nobody would have found this unless we had pursued and gone to next level," said Sartor. "Now the child is undergoing appropriate monitoring. These are potentially literally lifesaving findings."

Dr. Sartor and his team recently entered into a partnership with a California biotech company that can analyze tumor genetics through a blood sample. His team is also moving toward a third level of genetic analysis—transcriptomic analysis—whereby instead of analyzing the DNA, they examine the RNA of the tumor to see which genes are expressed, not simply whether they are mutated or normal. This test has utility for predicting the prognosis and the aggressiveness of the cancer. A fourth genetic testing option involves running DNA from a tumor tissue sample as opposed to the blood stream.

"We're doing these four types of genetic analyses with therapeutic implications for all and family implications for those that are inherited," said Sartor. " It's extremely exciting to be a better physician because we're now equipped with better knowledge—both in terms of drugs we should give and drugs we should not. Of course, there is still much to learn, and it would be folly to think the journey is over. We're just at the beginning."

LCRC HOSTS A CANCER MOONSHOT SUMMIT

LSU Health Sciences Center/LSU Cancer Center and LCRC hosted a "Cancer Moonshot Summit" on June 29, 2016, one of 270 such events on a national day of action hosted by the White House. This initiative brought together individuals and organizations to represent the entire cancer community—researchers, oncologists, care providers, philanthropists, data and tech experts, advocates, patients and survivors—and to encourage collaborations that accelerate the pace of progress in cancer research, prevention, treatment and care.

At the LCRC, over 140 individuals participated in the Moonshot event, including cancer survivors and their family members, physicians, nurses, cancer researchers, philanthropists and patient advocates. A panel of twelve professionals led the open discussion, including: Augusto Ochoa, M.D., Director, LSUHSC Stanley S. Scott Cancer Center; Scott Delacroix, M.D., Director of Urologic Oncology, LSUHSC School of Medicine; Elizabeth Fontham, M.P.H., Dr.P.H., Founding Dean and Emeritus Professor of the LSUHSC School of Public Health; Agustin Garcia, M.D., Section Chief of Hematology and Oncology at LSUHSC; Kathleen Gross, Director of the Al Copeland Foundation; Lydia Kuykendal, M.P.H., Louisiana Director of Government Relations for the American Cancer Society Cancer Action Network; Lucio Miele, M.D., Ph.D., Chair, Department of Genetics, LSUHSC; Lorrie Powel, PhD., Endowed Chair of Nursing, LSUHSC School of Nursing; Adam Riker, M.D., F.A.C.S, Chief of Surgical Oncology, LSUHSC Department of Surgery; Oliver Sartor, M.D., Medical Director, Tulane Cancer Center; Sue Singer, R.N. and volunteer in the cancer community, Donna Williams, Dr.P.H., Associate Professor, LSUHSC School of Public Health.

> Dr. Augusto Ochoa, Co-Director of the LCRC and Director of the LSU Health New Orleans Stanley S. Scott Cancer Center, was one of 28 scientific experts, cancer leaders and patient advocates who helped to guide the scientific direction of Vice President Joe Biden's National Cancer Moonshot Initiative.
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> Dr. Ochoa, who also holds the Al Copeland/Cancer Crusaders Chair in Neuroendocrine Cancer, was the only member of the National Cancer Institute's Blue Ribbon Panel from Louisiana. The panel served as a working group of the presidentially-appointed National Cancer Advisory Board. The LCRC was honored to be represented among these thought-leaders in the cancer community.

Following the event, all Summit hosts across the country were asked to submit a follow-up report to the Vice President which included ideas about varied topics, including the cost of cancer care and patient access, public education, supporting preventative health behaviors, creating a cancer healthcare continuum for patients through multi-disciplinary teams and unleashing the power of electronic medical records to benefit patients.

In a White House press release, Vice President Joe Biden said, "The Moonshot cannot be achieved by one person, one organization, one discipline or even one collective approach. Solving the complexities of cancer will require the formation of new alliances to defy the bounds of innovation and accelerate the prevention, diagnosis, treatment, and— ultimately— a cure. It's going to require millions of Americans speaking up and contributing what they're able. That's what the Cancer Moonshot Summit is all about."

NEW ADVANCES IN CANCER IMMUNOTHERAPY PROGRAMS

LSU Cancer Center New Orleans was recently recognized by the Al Copeland Foundation for its work in building a statewide network to bring new clinical trials to patients. These trials, made possible in part through work done at the LCRC, study the safety and effectiveness of new drugs and treatments. The support of the Al Copeland Foundation has allowed the development of a Cancer Immunotherapy Program that expands upon this work—with an emphasis on Merkel cell carcinoma, which took the life of Al Copeland Sr. in 2008.

As a result of this program implementation, LSU Cancer Center New Orleans is now being invited to participate in studies investigating the latest and most promising approaches to cancer treatments. One such study is a clinical trial to determine the effectiveness of MK-3475 (pembrolizumab) in treating patients with Merkel cell cancer, an aggressive form of skin cancer. The study focuses on cancer that cannot be removed by surgery or controlled with treatment, or has spread to other parts of the body. It is the first systemic intervention for patients with advanced Merkel cell carcinoma. Pembrolizumab, an immunotherapy drug, works differently than chemotherapy in that it boosts the body's own natural defense system to help fight cancer. LSU Cancr Center is one of just eleven sites in the country selected to enroll patients in this clinical trial.

The Cancer Immunotherapy Program will also lay the foundation for future opportunities at the LCRC in two important areas. The first is Cancer Biology and Genomics, which explores how the genetic background of an individual contributes to their susceptibility for developing certain diseases. Previously seen only as a basic research tool, genomics is now a rapidly emerging field of research with an ever-growing clinical significance and direct application to patient care. By virtue of the population served by LSU Cancer Center, the Center hopes to become a leader in the genomics of African-American, Hispanic and Vietnamese populations.

The second area, Health Disparities, focuses on how the differences in the presentation and outcome of diseases among races are not only related to socio-economic determinants, but also to biological and genetic differences. This has become even more significant since the response to treatment is not the same among the different racial groups.

These research undertakings will provide a unique opportunity to bring together clinical programs and focused basic research to develop a unique translational research center that will add to the growing national stature of LCRC. This work will promote LSU Cancer Center as a national referral site for patients with viral diseases such as Merkel Cell Carcinoma; moreover, these programs will help us create a unique state-of-the-art cancer immunotherapy program that will provide access to all new research and clinical advances in the use of these immunotherapies for cancer patients in Louisiana and beyond.

LCRC PARTNER INSTITUTIONS BOAST STATE'S ONLY TWO NATIONAL ACADEMY OF MEDICINE MEMBERS

Maureen Lichtveld, M.D., M.P.H., professor and chair in the Department of Global Environmental Health Sciences at Tulane University School of Public Health and Tropical Medicine, was recently elected as a member of the National Academy of Medicine (NAM), considered one of the highest honors in the fields of health and medicine. She joins Xavier University of Louisiana's Regina Benjamin, M.D., M.B.A., as one of Louisiana's only two members of the NAM— both from LCRC partner institutions.

Maureen Lichtveld, M.D., M.P.

National Academy of Medicine membership recognizes individuals who have demonstrated outstanding professional achievement and commitment to service. Lichtveld is one of 70 regular members and nine international members to be elected during NAM's 2016 annual meeting.

Established originally as the Institute of Medicine in 1970 by the National Academy of Sciences, the National Academy of Medicine addresses critical issues in health, science, medicine, and related policy and inspires positive actions across sectors. NAM works alongside the National Academy of Sciences and National Academy of Engineering to provide independent, objective analysis and advice to the nation and conducts other activities to solve complex problems and inform public policy decisions. The National Academies of Sciences, Engineering, and Medicine also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding. With their election, members make a commitment to volunteer their service in the Academies' activities.

CLINICAL TRIAL GENETICALLY MATCHES CANCER PATIENTS WITH TREATMENT OPTIONS

"MOST CLINICIANS AND INVESTIGATORS IN THE ONCOLOGY COMMUNITY BELIEVE THIS IS THE WAY WE'LL TREAT ALL CANCERS EVENTUALLY. WE'RE GOING TO FIND AN AGENT SPECIFIC TO THAT INDIVIDUAL'S TUMOR AT THE MOLECULAR LEVEL RATHER THAN SPECIFIC TO AN ORGAN TYPE."

William "Rusty" Robinson, M.D.
Chief, Section of Gynecologic Oncology, Tulane University School of Medicine

Emphasizing the importance of translational research amid all the work performed at the LCRC, Tulane Cancer Center is currently enrolling patients in The National Cancer Institute's Molecular Analysis for Therapy Choice clinical trial (NCI-MATCH)—a program that highlights the impact of precision medicine on cancer care.

This precision medicine trial genetically analyzes patients' tumors to determine whether they contain abnormalities for which a targeted drug exists and then assigns treatment based on the abnormality. It seeks to determine the effectiveness of treating patients based on the genetic profiles of their specific tumors.

This trial builds on decades of research into the genetic mutations that lead to cancer and the development of drugs that specifically target those mutations. It represents the culmination of efforts to create a precision medicine effort to treat cancer.

WHICH DRUGS ARE BEING STUDIED?

The drugs included in the trial have either been approved by the U.S. Food and Drug Administration for the treatment of cancers or are still being tested but have shown effectiveness against tumors with a particular genetic alteration. Drugs may be added over time as pharmaceutical companies and others develop promising new targeted therapies.

WHO IS ELIGIBLE?

Adults 18 years or older with advanced solid tumors and lymphomas that are no longer responding or never responded to standard therapy and have begun to grow may be candidates for the trial. The most common cancers included are those of the breast, colon, lung and prostate. However, one goal of the trial is to enroll patients with rare cancers, such as those of the eye, ureter and pituitary gland.

PATIENT ENROLLMENT PROCESS

In the initial screening phase, a biopsy procedure is used to remove tumor samples for DNA sequencing. The specimens are sent to one of four genetic testing labs, where they are analyzed for more than 4,000 genetic abnormalities across 143 genes. This process typically takes less than two weeks. If an abnormality is detected that is targeted by one of the drugs being studied in the trial, patients are further evaluated to determine if they meet the specific eligibility requirements of that sub-study.

Once enrolled, patients are treated with the targeted drug for as long as their tumor shrinks or remains stable. Patients with tumors that share the same genetic abnormality, regardless of tumor type, will receive the drug that targets that abnormality.

Patients can be considered for a second arm of the study if the first treatment they received was not successful and if genetic testing shows that the second abnormality is targeted by a drug being studied in the trial.

ANTICIPATED PATIENT COSTS

The trial covers the cost of the biopsy and molecular tests, and patients will receive the drugs without charge if they are eligible to enroll. Unless they are informed otherwise, patients or their health plan will need to cover all other costs, including the cost of tests, procedures or medicines to manage any side effects of the biopsy and treatment. Enrollees will not be paid for participation.

FOR MORE INFORMATION...

To learn more about NCI-MATCH, please consult your oncologist or contact Aniko Vigh, M.D., director of Tulane Cancer Center's Office of Clinical Research at avigh@tulane.edu or 504-988-6061.

LSU'S INNOVATIVE HIV CANCER CARE PROGRAM CONTINUES TO GROW

The HIV Cancer Care Program, centered at LSU Cancer Center and the University Medical Center–New Orleans (UMCNO), continues to provide multidisciplinary medical and navigation services to patients from Louisiana and throughout the Gulf South, with a special focus on underserved minority populations who suffer disproportionately from cancer.

Throughout 2016, the program focused on tailoring standard treatment, clinical trials, and prevention services to fit the needs of the regional population of persons living with HIV and cancer. A signature programmatic component is the effective coordination of care through a unique patient navigation program. This navigation is facilitated through key partnerships with clinic sites and community-based organizations, such as CrescentCare Health and Wellness Center, one of the largest HIV-focused community based organizations in the U.S., and more than twenty other organizations and clinics located throughout Southern Louisiana. The program is also guided by an active Community Advisory Board, including key members of the HIV advocacy community that reflect the patient population and provides critical insight and support for new initiatives within the program.

The clinic focal point of the program is the UMCNO Infectious Disease–Oncology Clinic. Four dedicated physicians provide complementary expertise (HIV–Dr. Parsons; Oncology–Dr. Tom Reske, Dr. Suki Subbiah, and Dr. Michelle Loch from LSUHSC) to a patient base averaging >70 patient visits per month. The clinic offers a "one-stop shop" for standard care, trials screening, and prevention services for patients with or at risk for cancer who are also infected with HIV and Hepatitis C virus (HCV). This primary medical team partners with multiple specialists in the areas of Radiology, Surgery, Urology, and many other Departments at Tulane Medical Center, CrescentCare and Ochsner Medical Center to provide state-of-the-art care. Some examples of this highly specialized care include embolization of liver tumors, provision of new and effective HCV medications not widely available to patients in Louisiana, bone marrow transplantation, and surgical excision and brachytherapy to patients with anorectal cancer.

Since its inception in 2013, the program has provided cancer treatment and prevention services to several hundred individual patients. Referrals continue to be received from throughout Louisiana, Mississippi, Florida and Texas.

GENETIC COUNSELORS ENHANCE PRECISION-MEDICINE COMPONENT OF CANCER CARE

Tulane Comprehensive Cancer Clinic recently welcomed Genetic Counselor Nicolette Walano to its multidisciplinary cancer care team. Nikki joins Chris Dvorak in assisting and providing select Tulane cancer patients with the information they need to make an informed decision about the possibilities, limitations and implications of genetic testing when it comes to their cancer care.

"We know there are certain types of cancer more likely to be hereditary than others," said Walano, who, along with Dvorak, sees several patients each month in a new dedicated genetics clinic in the Tulane Cancer Center. The patients are typically referred to the genetic counselors because of a family history or a specific personal history of cancer.

"In clinic, we take detailed family and personal histories, discuss testing options that might be appropriate for that individual, assist in implementing the tests, and then we send results back to the referring physicians (specialists, oncologists or primary care physicians either within Tulane or in the community), along with management guidelines for specific genes if someone is positive for a mutation," said Walano.

Tulane has offered genetic counseling services since the late 90s. "BRCA1 and BRCA2 were the first two cancer susceptibility genes available for hereditary testing," said Dvorak. "This testing is different than examining tumor tissue to determine whether certain genetic changes would be responsive to specific treatments and affect prognosis. The test can be offered to a subset of patients (with or without cancer) depending upon factors like family history, cancer type, and age of presentation. It looks for germline mutations that are usually present in every cell of the body and passed down from the prior generation—an inherited susceptibility to cancer."

Walano and Dvorak stress that their goal is not to convince patients to do genetic testing. "We fully inform them of their options and let them decide for themselves if they want to move forward," said Walano. "Some patients feel knowing they are at a higher risk for a recurrence or for other cancers is too psychologically distressing and instead decide not to participate, and that's o.k. We discuss their options and the potential of the results, and if they decide to proceed, we can assist with getting the testing done generally via either a blood or saliva sample that same day."

Not all the genes Walano and Dvorak test for have clear-cut surveillance guidelines. Many times, test results involve genes the physicians are not familiar with or results that aren't very clear cut. "Many genetic test results are not strictly positive or negative," said Dvorak. "Some results are what we call 'variants of uncertain significance'—changes not clearly benign or causing higher risk for cancer. We can help referring physicians and their patients interpret these results."

Since their move to the Cancer Center, Walano and Dvorak have the opportunity to interact more closely with the oncologists there, resulting in more patient referrals. "It's important to remember that genetic counseling doesn't necessarily have to lead to testing," said Dvorak. "Our goal is to inform patients and families of their options, not to persuade them to undergo these tests. It's an individual's choice."

"THE TEST CAN BE OFFERED TO A SUBSET OF PATIENTS (WITH OR WITHOUT CANCER) DEPENDING UPON FACTORS LIKE FAMILY HISTORY, CANCER TYPE, AND AGE OF PRESENTATION. IT LOOKS FOR GERMLINE MUTATIONS THAT ARE USUALLY PRESENT IN EVERY CELL OF THE BODY AND PASSED DOWN FROM THE PRIOR GENERATION—AN INHERITED SUSCEPTIBILITY TO CANCER."

Chris Dvorak
Genetic Counselor, Tulane Cancer Center

CLINICAL EVALUATION PARTNERSHIP PROVIDES COMPREHENSIVE GENOMIC PROFILING

LSU Cancer Center and OmniSeq®, a subsidiary of the Roswell Park Cancer Institute (RPCI), are now partnering to provide oncologists with comprehensive next generation sequencing of solid tumors for clinical decision support. The partnership allows comprehensive genomic profiling to be the first step for all advanced stage solid tumors whenever targeted therapy is a treatment consideration.

LSU Cancer Center will utilize OmniSeq ComprehensiveSM, a pan-cancer tumor profiling diagnostic panel, to screen patients at the LCRC and LSU facilities. Oncologists and patients can now receive personalized reports on individual genetic variants, including FDA-approved therapeutics, clinical trials for which the patient may qualify and potential hereditary variants.

"LSU Health New Orleans is excited to partner with OmniSeq as they provide a multifaceted approach to personalized medicine," said Dr. Augusto Ochoa, LCRC Co-Director and Director of LSU Health New Orleans Stanley S. Scott Cancer Center and principal investigator of a Minority Underserved National Cancer Institute Community Research Oncology Program (NCORP), funded by a grant to LSU Cancer Center. "OmniSeq's cutting edge technology and clinical insights will improve access to precision medicine in our underserved community, offer our physicians' guidance in the development of actionable treatment plans, and help to continue to improve the standard of care for patients at LSU Cancer Center. It will also allow NCORP investigators to design genomics-based clinical trials tailored to Louisiana and Mississippi patients."

EARLY PHASE CLINICAL TRIALS PROGRAM BRINGS NEW WAVE OF HOPE TO PATIENTS IN THE GULF SOUTH

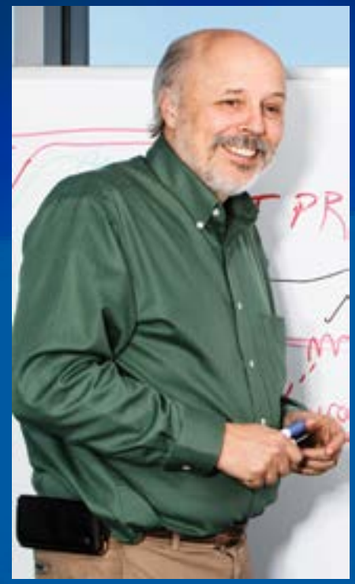
The Precision Cancer Therapies Program (PCTP), a multidisciplinary partnership between Ochsner Cancer Institute and The Translational Genomics Research Institute from Phoenix, Arizona (TGen), offers the region access to the latest in cancer therapeutics, research and advanced diagnostics. TGen is a non-profit biomedical research organization whose physicians and scientists collaborate widely with the oncology community to increase cancer survival rates through research-enabled medicine and early phase clinical trials.

The PCTP focuses on solid and hematologic tumor innovations by offering cutting-edge capabilities that include genetic testing/genomic mapping, identification of molecular pathway defects and novel treatments through advanced early phase trials (Phase 1 and 2 trials). Molecular tumor boards allow physicians to collaborate with leading translational scientists at the forefront of modern molecular medicine to review the results of genetic sequencing, proteomics and other advanced studies. Physicians are then able to create customized treatment plans based on the most up-to-date research and data.

Access to these ground-breaking, novel therapies allows patients to stay close to home during treatment and follow up appointments.

"Today, we know more about genes than ever before and with the mapping of the human genome, we are shifting away from treating cancer based on the tumor of origin and towards treating it based on the genetics of the tumor itself," says Dr. Marc Matrana, Deputy Medical Director, Ochsner Precision Cancer Therapies Program. "As Ochsner celebrates its 75th anniversary, we are proud to continue our legacy of innovative and collaborative cancer care."

AS A PART OF OUR EFFORTS TO IDENTIFY NOVEL DRUGS THAT WILL BIND AND INHIBIT THE LINE1 ENDONUCLEASE WE PERFORMED A COMPUTER-BASED SCREEN OF A COMMERCIALLY AVAILABLE LIBRARY OF DRUGS. THE IMAGES ABOVE SHOW ONE OF THE DRUGS FROM THE SCREEN BOUND TO THE LINE1 ENDONUCLEASE. THIS INFORMATION IS THEN USED TO CREATE NEW DRUGS THAT WILL HAVE DIFFERENT STRUCTURES TO INCREASE THE AFFINITY OF THE LINE1 ENDONUCLEASE FOR THE DRUG. THE PROTEIN IS SHOWN IN THE RIBBON STRUCTURE AND THE DRUG IS HIGHLIGHTED IN GREEN.



Prescott Deininger, Ph.D., serves on the prestigious National Academies of Sciences, Engineering and Medicine's Committee on Strengthening the Disaster Resilience of Academic Research Communities.

LCRC CO-DIRECTOR HELPS CREATE GUIDELINES TO PROTECT RESEARCH WHEN DISASTER STRIKES

Prescott Deininger, Ph.D., director of the Tulane Cancer Center, was honored this year with an invitation to serve on the prestigious National Academies of Sciences, Engineering and Medicine's Committee on Strengthening the Disaster Resilience of Academic Research Communities. The thirteen-member panel includes experts from a variety of fields, including biomedical research, engineering and architecture, with an ultimate goal of utilizing past experiences and best practices to create a set of proposed guidelines that will assist individual researchers, research institutions, sponsors and the government in mitigating the impact of future disasters, both natural and man-made.

"IT IS AN HONOR TO HAVE BEEN INVITED TO SERVE ON THIS PANEL. HOPEFULLY, THE IMPORTANT WORK THAT WE DO HERE WILL HELP TO PREVENT THE LONG-TERM EFFECTS OF DISASTERS ON THE VITAL ENDEAVORS OF RESEARCHERS IN ALL FIELDS ACROSS THE UNITED STATES."

Prescott Deininger, Ph.D.
Director, Tulane Cancer Center and Co-Director, Louisiana Cancer Research Center

Dr. Deininger brings a unique perspective to the committee. He has expertise both as a cancer researcher whose work was severely impacted by Hurricane Katrina and as a cancer center director currently responsible for supporting and protecting the research endeavors of cancer researchers at Tulane and the LCRC.

Sponsored by the National Institutes of Health, the Howard Hughes Medical Institute and the Doris Duke Charitable Foundation, the committee organized three regional stakeholder meetings in an effort to highlight potential hazards and assess various disaster plans employed by researchers, institutions and sponsors throughout the country. They also organized a site visit to New York University to learn more about the damage there from Super Storm Sandy, and heard first-hand testimony from researchers and others across the U.S. who had been impacted by other disasters, including one who gave testimony regarding the unique challenges faced in post-Katrina New Orleans.

The final report produced by the committee— expected to be submitted by June 2017—will be based on the information gathered at these regional meetings, as well as from additional literature review.

NEXT GENERATION SEQUENCING: A VITAL COMPONENT OF "PRECISION MEDICINE" IN CANCER CARE

Next generation sequencing (NGS) is a state-of-the-art technology that provides cancer researchers a thorough analysis of nearly all of the genetics related to a biological sample, such as a tumor specimen, in one test. This technology can also determine changes in gene expression caused by mutations and signaling pathway alterations within cells that lead to cancer.

According to Erik Flemington, Ph.D., director of the Tulane Cancer Center NGS Sequence Analysis Core, "NGS gives us the ability to explore what's going on in the most appropriate model system— human beings. We no longer have to rest our hopes entirely on tissue culture or animal models. We have the ability to know what is really happening genetically inside of the patient. It's exactly the right environment."

Tulane Cancer Center's NGS Sequence Analysis Core is supported by LCRC funds and philanthropic donations from the Cancer Crusaders, a volunteer organization that has, since the mid-1970s, raised over $4 million to support cancer research at Tulane and LSU.

While there are many NGS centers located throughout the United States and the world, Tulane's NGS Sequence Analysis Core is unique in that it isn't designed just to generate specific data for researchers, but instead it actively trains researchers in all of the most current ways to analyze and interpret their data.

"IT'S A VERY PERSONALIZED WAY TO ADDRESS CANCER, POTENTIALLY LEADING TO BETTER OUTCOMES."

Erik Flemington, Ph.D.
Director of the Next Generation Sequencing Core at Tulane Cancer Center

For that, researchers turn to Senior Research Scientist Melody Baddoo, a Xavier University graduate, who was recruited to the NGS Core when it opened and has been training and perfecting her analytical and interpretational skills ever since.

But Melody doesn't work in isolation. One of the unique features of the NGS Core is the goal to teach users computational methods rather than perform all of the analysis for them so that they can gradually gain the skills necessary to interpret their data themselves. This is important, because it takes intimate knowledge of the data to ask new questions, overcome potential problems and explore new theories related to their research.

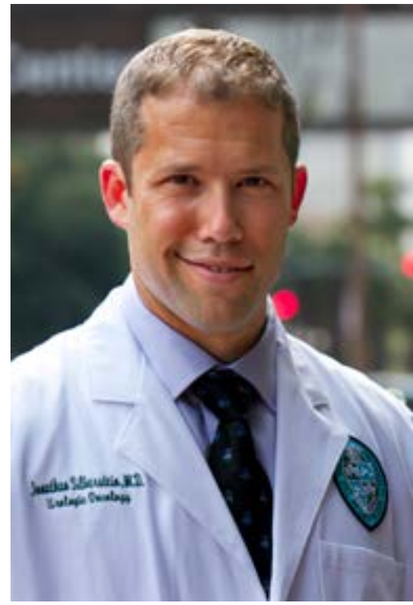
Users are encouraged to ask questions of each other and to share what they learn while processing data sets so that there is a free exchange of ideas. It's a communal environment in which everyone learns from each other.

Occasionally assisting Baddoo with the analysis of data is Xavier University's Karen Zhang, Ph.D. Use of the Core has expanded over the past few years, as LCRC researchers from multiple partner institutions have learned of its availability and value.

In addition to its impact on basic science research, NGS has substantial potential to help guide clinical cancer care, and this potential is already beginning to be realized, according to Flemington. Because of the comprehensive nature of the data this technology generates, it can lead to "precision medicine." For instance, NGS analysis of a tumor biopsy can reveal nearly all of the genetics related to that particular tumor and all of the signaling pathways that are altered in that sample. With that knowledge, patient care can be customized based on precisely those genes that are mutated or those pathways that are altered.

"It's a very personalized way to address cancer that is leading to better outcomes," said Flemington.

3D PATIENT-SPECIFIC TUMOR MODELS GIVE SURGEONS A "DRY-RUN"



Three-dimensional (3D) printers are on the cusp of revolutionizing the way every doctor practices medicine. While in the distant future these machines may potentially allow the creation of new patient-specific organs, current applications are already here and many more are just around the corner. 3D printers come in a variety of shapes and sizes and perform by layering successive thin sheets of materials stacked atop one another to create a physical structure.

Jonathan Silberstein, M.D., chief of the Section of Urologic Oncology at Tulane University School of Medicine, and his team have been adapting and evolving 3D printing technology for solid organ soft tissue tumor models. Specifically, they have been looking at kidney masses and kidney cancer, as well as prostate cancer. These models to date have demonstrated improvements in patient understanding, surgery selection, medical student and resident education.

Importantly, they have started to create these models out of materials that look and feel very similar to actual kidneys. Since the models are based on the patient's individual tumor and anatomy, it allows the surgical team to perform a "dry run" on a model that is specific to the patient. According to Silberstein, "This technology has the potential to reinvent the way we teach and train our young surgeons, and for experienced surgeons adapting to a new technology such as robotics, it will flatten the learning curve."

ADVANCES IN DISCOVERING AND CORRECTING GENETIC INSTABILITY

Cecily DeFreece, Ph.D., an Assistant Professor in the Biology Department at Xavier University of Louisiana, has been doing important work in the field of genetic instability and drug discovery. The focus of the work is the contribution of the human mobile element LINE1 to genetic instability and the onset or progression of disease.

The lab is studying the contribution of breaks in the DNA caused by the LINE1 endonuclease protein, which must create the breaks in DNA in order for the LINE1 element to insert itself into a new region of the genome. While many of the breaks caused by the LINE1 endonuclease do not cause problems, sometimes the breaks are improperly repaired and result in mutations, which are changes in to the DNA of the human genome termed mutations. These resulting mutations may lead to the onset or progression of various diseases, including different types of cancers.

Current research has shown that LINE1 elements are more active in different types of cancers including colon, ovarian and breast cancers. To address the relationship between the potential damage that can be caused by LINE1 elements, the DeFreece lab has been trying to identify a novel drug inhibitor of the LINE1 endonuclease. The inhibitor will act as a tool that can be utilized to determine if the DNA damaging activity of the LINE1 endonuclease does result in mutagenic changes to genomic DNA.

This research has been performed in close collaboration with the laboratory of Prescott Deininger at Tulane University, an expert in the field of mobile elements. Both labs work together to determine the effect of drugs on LINE1 expression, LINE1 endonuclease DNA damaging activity, LINE1 element mobilization and lastly on cellular toxicity. The partnership has identified three drug inhibitors of the LINE1 endonuclease so far, and more progress is expected in the coming year.

OCHSNER HEALTH SYSTEM OFFERS NATIONAL CANCER INSTITUTE (NCI) STUDY TARGETING PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA (CLL)

Ellen Johnson of Crosby, Mississippi, experienced a two-year period where she felt sick all the time. With knots in her neck and battling constant fatigue, she almost felt like she was dying. In September 2014, her lymph node biopsy revealed a shocking diagnosis of Chronic Lymphocytic Leukemia (CLL), a cancer of blood-forming cells and known as the most common form of chronic adult leukemia. It was then that her physicians in Mississippi referred her to Hematologist Oncologist Dr. Jay Brooks of Ochsner Medical Center—Baton Rouge for further treatment. Dr. Brooks recommended Ellen as a candidate for a new research study which is testing the effectiveness of using cancer-fighting drug ibrutinib, in pill form, in combination with infused rituximab to treat CLL as an alternative to traditional multidrug infusion through the vein.

"CLL begins in your bone marrow, which is the spongy substance inside your bones that makes blood cells, and can spread from the bone marrow to the blood and, over time, to other organs and parts of the body. The standard form of treatment is chemotherapy drugs delivered through the vein," said Dr. Brooks. "This study is testing a new concept and can potentially alter the way CLL patients are treated. This discovery tests the ability to treat patients using an oral drug so that they can continue treatment at home more conveniently and possibly with fewer side effects. It is truly remarkable to have offered this study to patients within the region."

"I felt better almost immediately," says Ellen. "I didn't have harsh side effects such as hair loss or nausea, and people couldn't believe how good I looked and felt. I told myself that being part of a research study is a privilege. If I was going to get this chance, I was going to do it right. I continue to take my medications on schedule, my appetite has returned and I'm extremely grateful for life."

The American Cancer Society estimates that 14,620 new cases of CLL were diagnosed in the United States last year and that CLL accounts for approximately one third of leukemia

This research study, which closed to enrollment of new patients in June of this year, is a randomized phase III trial that is testing how well Ibrutinib, in conjunction with Rituximab, works compared to other chemotherapy drugs in treating younger patients (70 years or less) with previously untreated chronic lymphocytic leukemia or small lymphocytic lymphoma, a cancer related to CLL that is commonly found in lymph nodes. Ibrutinib works to stop the growth of cancer cells by blocking certain enzymes needed for cell growth. Monoclonal antibodies, such as rituximab, can also block cancer growth in different ways by stopping the ability of cancer to grow and spread, or by finding cancer cells to help either kill or carry cancer-killing substances to them. This study compares the effects, good and/ or bad, of each treatment arm. Doctors hope that the experimental treatment in this study compared to the usual treatment will be more useful against CLL; however, results are still being investigated.

"Everything has been great and this trial has made such a difference in my life," said Ellen. "Ochsner has been an amazing place. The chemotherapy staff bent over backwards to make me comfortable. I have never seen people work so well together in my entire life, and I'm thankful for this life-saving opportunity."

Enrolled participants receive treatment for about 6 months or up to a number of years depending on which treatment group assigned to. Participants will be asked to return to clinic for follow-up tests for about four times per year up to a maximum of 10 years after study enrollment.

Principle investigators at Ochsner sites included Dr. Brooks, Dr. Robert Emmons, Ochsner Medical Center— Jefferson Highway and Dr. Srikanth Tamma, Ochsner Medical Center— Kenner.

The Ochsner Cancer Network is part of the Ochsner Health System and provides multidisciplinary care for adult and pediatric cancer patients. These patients benefit from a collaborative approach to cancer care by a highly skilled team of physicians, oncology nurses, social workers, researchers, and other healthcare professionals. Ochsner has been recognized as a High Performing hospital by U.S. News & World Report.

In 2017, the Ochsner Baton Rouge Cancer Center will be the first in Baton Rouge to conveniently offer a hematology/oncology outpatient clinic with both chemotherapy infusion and radiation oncology services on one floor in the same building. The new $12.8 million facility will be located in the current Physicians Plaza II building at the Ochsner Medical Center—Baton Rouge O'Neal Lane campus.

HEALTHY ROOTS FOR YOU: HELPING NEW ORLEANS EAT HEALTHY AND STAY HEALTHY

Currently, some of the most pressing public health concerns are obesity and its related co-morbidities, which disproportionately affect low-income, at-risk communities. In response to this crisis, the Healthy Roots for You (HRFY) pilot program was created in July 2016, a collaboration between academic and community partners, including LCRC researchers located at Louisiana State University Health Sciences Center, Hollygrove Market and Farm, Daughters of Charity and Supplemental Nutrition Assistance Program (SNAP) participants.

Using web-based media, HRFY applies social marketing strategies designed to increase fruit and vegetable purchases among SNAP participants at a local farmers market in New Orleans. The partnership between community and academic resources has been instrumental in the development of this program, which promises to be both cost-effective and sustainable.

For the past eight years, the farmer's market has sold locally-grown, fresh produce to low-income customers at a 20% discount to all individuals enrolled in SNAP. However, there is a documented lack of awareness of this incentive among SNAP recipients and the general population. HRFY addressed this need by raising awareness of accessible, fresh, locally-sourced foods through on-line content, a website, social networking accounts and an e-mail address. Highlights included the availability of produce, the discount for SNAP customers, healthy recipes, cooking videos and nutrition education.

This six-month pilot intervention was completed on December 31, 2016. The results from this program will be used to continue this research and expand to other farmers' markets in the New Orleans area.

EXPANDING THE FOCUS ON HEALTH DISPARITIES IN LOUISIANA

Through the efforts of LSU Cancer Center researchers, studies now being performed at the LCRC are addressing the broader societal influences on chronic diseases that disproportionately affect minority populations.

LCRC researchers have capitalized on recent medical advancements such as electronic health records to access clinically-collected health outcomes data (hypertension, diabetes, hyperlipidemia, heart disease, cancers, etc.) from a large patient population across Louisiana. LSU Cancer Center researchers are employing novel methods to integrate environmental data within Patient Centered Outcomes Research (PCOR) to characterize the role of social determinants of health—access to health foods, safe places to play, safety and income inequality, among others—in a unique dataset.

LSU Cancer Center is also examining the role of an individual's neighborhood environment on the health of patients treated by community-based health providers such as Ochsner, Daughters of Charity Health Centers, EXCELth Primary Care Network, and Access Health Louisiana. Ultimately, LCRC researchers will identify modifiable factors in the neighborhood and community environments across Southeast Louisiana that contribute to the health of our residents. This research will identify modifiable factors that can be addressed to reduce the growing disparities in chronic diseases disproportionately affecting minority populations across Louisiana.

TOBACCO FREE LIVING (TFL)

GOAL 1
PREVENT INITIATION AMONG YOUTH AND YOUNG ADULTS

GOAL 2
ELIMINATE EXPOSURE TO SECONDHAND SMOKE

GOAL 3
PROMOTE CESSATION RESOURCES

GOAL 4
ELIMINATE TOBACCO-RELATED HEALTH DISPARITIES

TFL GOAL 1
PREVENT INITIATION AMONG YOUTH AND YOUNG ADULTS

March 16, 2016 *More than 200 students from across the state of Louisiana gathered on the steps of the State Capitol during a rally hosted by the Louisiana Campaign for Tobacco-Free Living for Kick Butts Day, a national day of activism.*

November 17, 2016 *Members of the Girlie Girls Defy Team received a proclamation at the Calcasieu Parish Police Jury Meeting recognizing the Great American Smoke Out and to voice their support of a smoking and vaping ban in parish buildings and parks, which passed unanimously.*

TFL GOAL 2
ELIMINATE EXPOSURE TO SECONDHAND SMOKE

#SMOKEFREENOLA CELEBRATES ONE-YEAR

NEW ORLEANS MARKS IT'S ONE YEAR ANNIVERSARY OF BEING SMOKE-FREE WITH WEEK OF FESTIVITIES

The Healthier Air for All Campaign (HAFA) with the Coalition for a Tobacco-Free Louisiana (CTFLA) worked together to celebrate the one-year anniversary of the implementation of the New Orleans smoke-free ordinance. The Smoke-Free Ordinance which unanimously passed on January 22, 2015 went into effect April 22, 2015. Countless New Orleans bar employees, casino employees, patrons to these venues and entertainers, have come forward to express the positive impact this ordinance has had on their health and happiness.

"Since New Orleans has gone smoke-free, my friends who play horn have twice the stamina, my friends who sing don't lose their voices due to someone else's habit, my friends from around the country can breathe in our venues like they have been doing in most cities in the country" said Paul Sanchez, New Orleans musician.

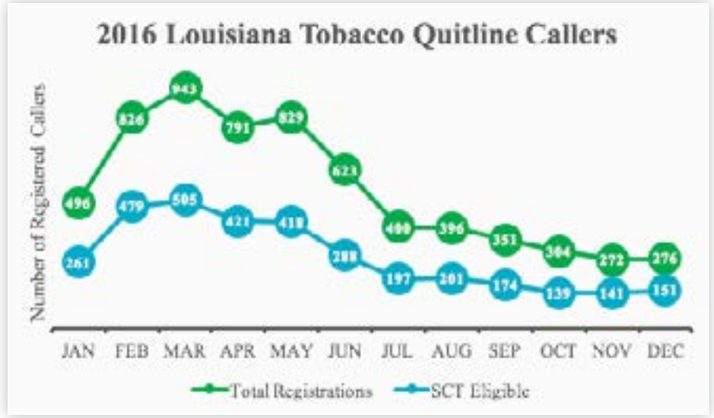
TFL PARTNERSHIP WITH THE LOUISIANA MUNICIPAL ASSOCIATION

The TFL regional staff participated in the Louisiana Municipal Association 79th Annual Convention in Alexandria, LA— July 28-30th 2016). TFL served as a conference partner, provided educational materials on the benefits of smoke-free environments, and presented to hundreds of municipalities and their mayors and councils the need for them to promote healthier communities by adopting smoke-free local ordinances. There were over 300 municipalities represented at the LMA conference.

TFL GOAL 3
PROMOTE CESSATION RESOURCES

2016 LOUISIANA TOBACCO QUITLINE CALLERS

The following chart illustrates the number of new callers to the Louisiana Quitline during each month of 2016— totaling 6,507 callers. The total number of registrations are shown by the green line, while the blue line shows the number of callers eligible for inclusion in the Smoking Cessation Trust when registering for the Quitline. The beginning of the year showed a higher call volume due to the effect of the ongoing CDC's TIPS from Former Smokers campaign. While volume did decrease throughout the year, the Quitline continued to see new registration numbers of 270 or more per month throughout 2016.



GREAT AMERICAN SMOKE OUT & JEFFERSON PARISH COUNCIL

Jefferson Parish Councilmember Mark Spears, Jr. (District 3) recognized the Smoking Cessation Trust and its partners Ochsner Health System, West Jefferson Medical Center and East Jefferson Medical Center as part of the Great American Smoke Out during the November 2, 2016 Parish Council Meeting for making Jefferson the leading parish in Louisiana for approved applications to the Trust's Cessation Program.

The Trust and its partners have processed over 8,500 approved applications as of October 2016 in Jefferson Parish alone, compared to over 5,800 in Orleans Parish during the same period.

TFL GOAL 4
ELIMINATE TOBACCO-RELATED HEALTH DISPARITIES

AFRICAN AMERICAN MALE CESSATION CAMPAIGN

The African-American Male Cessation pilot media campaign got underway in Shreveport. The focus of this campaign is to increase awareness of the Louisiana Tobacco Quitline (1-800-QUIT-NOW), the QuitWithUsLA.org website, and the Smoking Cessation Trust—the cessation services available to them. Campaign messaging will assure our target audience they will not only have the resources available to help them stop smoking/using tobacco, but that they will also have personal support, 24 hours/day, and 7 days/week. Currently, African-American males, in particular those with low-socioeconomic statuses, have the highest smoking rates and are the least likely to utilize the Louisiana Tobacco Quitline.

There are billboards, radio ads, educational and outreach marketing materials developed to compliment the elements of this campaign.

SMOKE-FREE PUBLIC HOUSING IN LOUISIANA

On November 30, 2016, the U.S. Housing and Urban Development (HUD) Secretary Castro announcened that public housing developments in the U.S. will now be required to provide a smoke-free environment for their residents. TFL has partnered with the Louisiana Department of Health (LDH) to educate HUD and public housing authorities on smoke-free residences as directed by a federal directive to have all public housing sites smoke-free by 2018. The Communities of Color Network, TFL along with LDH has conducted three workshops this quarter to educate and train public housing authorities, and staff on the changes, and the dangers of tobacco use and secondhand smoke. Several educational pieces and toolkits have been developed to coincide with the trainings and education. Cessation promotion will coincide with these trainings, therefore educating residences on the Louisiana Tobacco Quitline— 1-800-QUIT-NOW and the Smoking Cessation Trust resources.

NEW FACULTY

DR. RAKESH SRIVASTAVA
Professor

Dr. Srivastava earned his Ph.D. from the University of Guelph, Ontario, Canada in 1991, in the field of Endocrinology. He has a broad background in carcinogenesis, cell signaling, cancer prevention and therapy, drug discovery and development and applied to the areas of pharmacology, cancer treatment and cancer prevention. Dr. Srivastava's postdoctoral training was accomplished at the National Cancer Institute and the National Research Council, National Academy of Sciences, NIA/NIH, where he examined the molecular mechanisms of new anticancer drugs, Bcl-2 family members and apoptosis. He has extensive experience in pancreatic cancer and the utilization of KrasG12D mice models. As PI or Co-Investigator on numerous university, private, and federally funded grants, he has laid the groundwork for his research in understanding molecular targets of cancer. Additionally, he has examined the antitumor activities of several new drugs which are presently utilized in clinical trials or have already been approved by the FDA for treatment of cancer. Furthermore, Dr. Srivastava has trained several undergraduate and graduate students, and clinical and postdoctoral fellows. He has served as either editor or managing editor for several books and peer-reviewed journals. He has 15 book chapters, 115 peer reviewed publications and 160 national and international presentations. Dr. Srivastava comes to us from the Kansas City VA Medical Center, MO, where he was a Senior Scientist and Professor. Presently, Dr. Srivastava is Professor at the LSUHealth Sciences Stanley S. Scott Cancer Center, and the LSUHealth Sciences Center, Department of Genetics, New Orleans, LA.

DR. SAMRAT DUTTA
Professor

Xavier University of Louisiana welcomes Dr. Samrat Dutta, a new faculty who joined the Department of Chemistry as an Assistant Professor in the autumn of 2016. Dr. Dutta previously served as an Ellen Williams Distinguished Postdoctoral Fellow at University of Maryland and as a Co-Principal Investigator at the University of Pittsburgh. He obtained a doctoral degree in Physical Chemistry from the University of Iowa and has a dual master's degree in Physical Chemistry and Polymer Sciences.

At Xavier University, Dr. Dutta plans to develop economically viable and clinically attractive protocols that will provide doctors with information that is currently not available through standard medical tests. To this end, he will use LCRC research funds to develop unique nanomaterials that can be used to detect and analyze cancer cells at early stages in the infrared.

His approaches promise to drastically reduce misdiagnosis of cancer, promote personalized cancer therapy and improve life expectancy. In addition, his research opens up highly-developed but underutilized infrared technology for medical diagnosis, thus ensuring quick turnaround of science to application.

DR. YAGUANG XI, M.D. PH.D.
Professor

Dr. Xi received his M.D. at the Inner Mongolia Medical University, Department of Surgery, China in 1996. He practiced as a surgeon prior to my earning his Ph.D. from Peking University School of Oncology, China, in 2003, where he received the Outstanding Doctoral Dissertation Award, and trained as a postdoctoral fellow in the areas of cancer biology, genetics, genomics, and translational research. His career goal is to improve the overall survival of cancer patients by translating his research accomplishments from "bench" to "bed" through my clinical practice. In order to achieve this goal, he has been studying microRNAs for their functions in human cancer prevention, diagnosis, therapeutic response, and prognosis for more than 10 years. He has authored 65 publications (average 6 publications per year) and has presented his work at both national and international conferences. His current research focuses on the study of the molecular mechanisms involving microRNA in human cancer chemoprevention by the nonsteroidal anti-inflammatory drugs (NSAIDs). The mechanisms responsible for NSAIDs anticancer activity have not been fully understood, although, numerous studies have shown that NSAIDs are an important class of cancer chemopreventive agents with pleiotropic antineoplastic activities, including inhibition of tumor cell proliferation, induction of apoptosis, and suppression of angiogenesis. Dr. Xi is presently Professor at the LSU Health Sciences Stanley S. Scott Cancer Center and the Department of Genetics. He comes to us from the University of South Alabama Mitchell Cancer Institute in Mobile, Alabama where he was Associate Professor of Oncologic Sciences.

DR. SHARMILA SHANKAR, PH.D.
Professor

Dr. Shankar earned her Ph.D. from the University of Mumbai, India in 1999 in the field of Chemistry. As a postdoctoral fellow at University of Maryland and at the National Institutes of Health, she expanded her research to cancer biology and has a broad background in Chemistry, Biochemistry and Tumor Biology. She has extensive experience in pancreatic cancer and research utilizing KrasG12D mice models and has examined the efficacy of various anticancer drugs and chemopreventive agents in vitro and in vivo. She has published several papers on prostate, pancreatic and brain cancer stem cells. She has authored and co-authored several book chapters and published over 64peer-reviewed journal articles. Her present work examines the molecular mechanism of the chemopreventive properties of sulforaphane in inhibiting pancreatic cancer progression through modulation of pluripotent stem cells. Dr. Shankar comes to us from the University Of Missouri School Of Medicine, Department of Pathology, Kansas City, MO and the Kansas City VA Medical Center, Kansas City, MO, where she was Associate Professor and Senior Scientist, respectively. Presently, Dr. Shankar is Associate Professor at the LSUHealth Sciences Stanley S. Scott Cancer Center, and the LSUHealth Sciences Center, Department of Genetics, New Orleans, LA.

LOUISIANA CANCER RESEARCH CENTER

STATEMENT OF FINANCIAL POSITION

June 30, 2016 (with comparative financial information as of June 30, 2015)

ASSETS

	2016	2015
Cash	18,505,915	15,443,649
Investments	10,193,793	11,202,216
Receivables—Grants	3,340,115	7,728,380
Receivables—Other	437,540	379,730
Property and Equipment	94,066,014	85,994,689
Prepaid Expenses	73,974	151,000
Deposits	52,400	52,400
TOTAL ASSETS	**126,669,751**	**120,952,064**

LIABILITIES AND NET ASSETS

LIABILITIES	2016	2015
Accounts Payable	3,317,775	6,028,917
Retainage Payable	644,852	–
Accrued Liabilities	90,916	89,741
TOTAL LIABILITIES	**4,053,543**	**6,118,658**

NET ASSETS	2016	2015
Unrestricted	888,174	790,567
Temporarily Restricted	121,728,034	114,042,839
TOTAL NET ASSETS	**122,616,208**	**114,833,406**
TOTAL LIABILITIES AND NET ASSETS	**126,669,751**	**120,952,064**

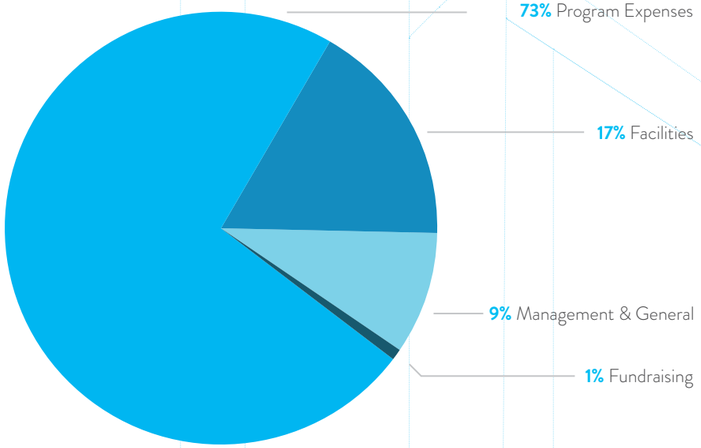
LOUISIANA CANCER RESEARCH CENTER

STATEMENT OF ACTIVITIES

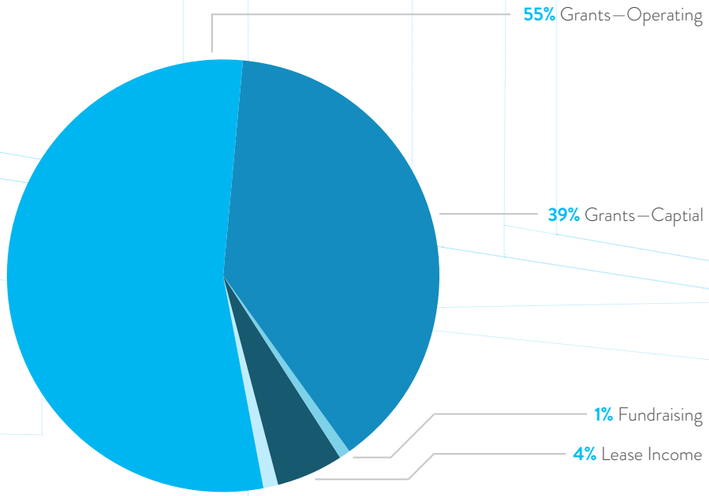
Year ended June 30, 2016 (with summarized financial information for the year ended June 30, 2015)

REVENUES	UNRESTRICTED	TEMPORARILY RESTRICTED	2016 TOTAL	2015 TOTAL
Grants		24,518,840	24,518,840	19,427,501
Lease Income	1,182,878		1,182,878	1,522,067
Investment Income/Interest		112,866	112,866	–
Other	116,365		116,365	78,864
Fund-raising	211,994		211,994	202,227
Net Assets Released from Restrictions	16,946,511	(16,946,511)	–	–
TOTAL REVENUES			**26,142,943**	**21,230,659**
EXPENSES				
Research Expenses	5,463,935		5,463,935	5,955,257
Cessation Expenses	5,842,883		5,842,883	5,970,124
Salaries and Related Benefits	1,038,489		1,038,489	911,431
Operating Services	2,516,907		2,516,907	2,394,624
Supplies	32,165		32,165	25,922
Professional Services	496,178		496,178	651,659
Travel & Meeting Expenses	12,672		12,672	5,279
Depreciation	2,802,027		2,802,027	2,830,202
Fund-raising	80,208		80,208	130,912
Fund-raising distributions	54,472		54,472	114,860
Other	20,205		20,205	13,744
TOTAL EXPENSES	**18,360,141**		**18,360,141**	**19,004,014**
INCREASE(DECREASE) IN NET ASSETS	**97,607**	**7,685,195**	**7,782,802**	**2,226,645**
NET ASSETS, BEGINNING OF YEAR	790,567	114,042,839	114,833,406	112,606,761
NET ASSETS, END OF YEAR	**888,174**	**121,728,034**	**122,616,208**	**114,883,406**

OPERATING EXPENSES 2016



FUNDING SOURCES 2016



INVITING THE COMMUNITY TO EXPLORE THE CENTER

THE AACR PUBLIC FORUM WASN'T THE ONLY COMMUNITY FORUM HOSTED ONSITE AT THE CENTER. IN ADDITION TO MANY SMALL INFORMATIONAL TOURS AND WALK-THROUGHS, SEVERAL LARGER GROUPS VISITED THE LCRC TO LEARN MORE ABOUT THE RESEARCH HAPPENING ONSITE.

In June of 2016, the LCRC welcomed 40 junior and senior high school students who were taking part in a STEM camp in Thibodaux at Nicholls State University. The students and their college counselors spent the morning at the LCRC and received a tour focused on four of the shared scientific cores located in the building. Dr. Tom Wiese took the lead in coordinating the visit.

The LCRC was also pleased to welcome a group of cyclists from Texas4000, a non-profit that cultivates student leaders and engages communities in the fight against cancer. The group's cornerstone event is a 4,000+ mile bike ride from Austin to Anchorage, with many smaller bike treks throughout the year. Advocates visited the research center as part of one of these fundraising rides and spent the better part of a day learning about the work the LCRC is doing through its partner organizations.

If you would like to schedule your own tour of our facility, please visit louisianacancercenter.org or call 504.210.1591.