

2018

Conquest

Johnson Cancer Research Center



K a n s a s S t a t e U n i v e r s i t y

95% of donated funds go directly to K-State cancer research, while 5 percent is used to advance the university.

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The fight starts here!

From nanoparticles and stem cells to antioxidants and drug discovery, Kansas State University faculty are conducting the basic and translational cancer research that leads to new treatments and cures, as well as training tomorrow's scientists and medical professionals. To support the Johnson Cancer Research Center's vision to conquer cancer in our time, simply use the enclosed envelope to send your gift, or donate online at ksufoundation.org/cancer. With your help, we make a difference! To learn more about how you can support K-State cancer research and education, contact Shelley Carver at **800-432-1578** or shelleyc@ksufoundation.org.

On the cover: Robert DeLong, associate professor of anatomy and physiology, and Elza Mathew, a doctoral candidate in anatomy and physiology.



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It has been a busy year at the Johnson Cancer Research Center. We got a workout in the Walk Kansas 5K for the Fight, boogied down at the Pink & Purple Polyester Party, hit the links at the 20th annual Rob Regier Memorial Golf Tournament, and learned about research and breast cancer survivorship at the Pink Power Luncheon. From rodeos to radio, our supporters have worked hard so that Kansas State University scientists can fight cancer.

Unbelievably, it's 2018 and we can see the end of the second decade of the 21st century just around the corner. I guess that now we'd all like to see some 21st-century progress in the fight against cancer. In this issue of Conquest, we show you just that. Rob DeLong is perfecting the use of nanoparticles to deliver custom-made nucleic acids to destroy cancer cells and activate the host defense system. Santosh

Aryal is making anti-cancer drugs last longer so that the host has more time to fight back. Zhilong Yang is fighting cancer with a virus once used to diminish the devastation of smallpox. These amazing quests are occurring all over campus, demonstrating our broad support of K-State's scientific infrastructure and 2025 goal to become a Top 50 public research university.

Also in this issue, we reminisce with C. Clyde Jones about his years in K-State's College of Business Administration and his desire to serve others. We were saddened by the loss of his wife, Midge, and he talks about how that loss ramped up his interests in helping us fight cancer.

We also visit with two of our finest undergraduate Cancer Research Awardees, Kathlyn Gomendoza and Vaithish Velazhahan. They share with us their interesting perspectives as K-State student researchers vested in laboratories and competing with the best and brightest in the nation for prestigious awards.

My first full year as the interim director of the Johnson Cancer Research Center in the College of Arts and Sciences was very exciting. We are moving forward with a bold new vision to become a National Cancer Institute-Designated Basic Laboratory Cancer Center. Our more immediate goals are to hire a permanent director to lead that quest and to build programs to make us competitive in the application process. For the latter, we are currently planning new centers of excellence in cancer research. Please watch for more exciting news about them and consider supporting this effort.

As always, I am proud of the work our research affiliates, advisory council and staff do to make the center successful. I'm even more proud of the 766 donors who helped make our fight for a cure a reality in 2017. Thank you for supporting the Johnson Cancer Research Center.

A handwritten signature in black ink that reads "S. Keith Chapes". The signature is written in a cursive, flowing style.

S. Keith Chapes / Interim Director

Using RNA to battle cancer by blocking pathways

By Tiffany Roney



\$3,252,657

has been invested in promising cancer studies since 2003, but \$5,074,644 was requested.

Robert DeLong, associate professor of anatomy and physiology at Kansas State University, believes ribonucleic acid, or RNA, has big potential to conquer cancer.

A self-described “RNA guy,” DeLong said that many types of RNA have the ability to code for and regulate gene expression in cells and tissues. With an Innovative Researcher Award from the Johnson Cancer Research Center, DeLong is exploring whether he can deliver modified RNA into cancer cells, using nanoparticles to shut down cancerous pathways at the molecular level.

“No cancer therapy available today treats the spread of cancer, but maybe we can send nanoparticles and RNA to sites where cancer has spread to deprogram cancer and stop it in its tracks,” DeLong said.

He plans to test these theories with a live imaging system that he and Santosh Aryal, assistant professor of chemistry, purchased with an Equipment Award from the Johnson Cancer Research Center.

“Funding from the center has enabled our research to grow in this exciting new area since coming to K-State, and I look forward to continuing to partner with them,” DeLong said.

He is working with several different classes of RNA, expanding recently from micro-RNA, or miRNA, to long noncoding RNA and aptamers, which are another class of RNA.

“If you want to kill the cancerous cells in a tumor, it’s not enough to shut down or deliver one gene at a time,”

DeLong said. “Instead, using these newer classes of RNA, it may be possible to knock down not just one cancer pathway, but multiple pathways.”

Long noncoding RNA, or lncRNA, also is important to DeLong’s research because when lncRNA enters cancer cells, it may uncouple RNA-protein interactions, essentially dewiring the cancer cells.

“That’s really the key to completely shutting down cancer and killing all the cancer cells,” DeLong said. “If you only use a single medicine to hit a single target, it probably won’t kill the cancer completely, but if you affect enough pathways in the cancer cell, the cancer shuts down.”

DeLong is also working with aptamers, which are similar to antibodies. Often used to target tumors, aptamers may be superior because they can be chemically synthesized and are 99 percent pure, and scientists can dictate their specific sequence.

“We think aptamers will be better for targeting tumors because aptamers can do what antibodies do: bind to

specific proteins on the surface of cancer cells. However, aptamers can do that more consistently,” DeLong said. “This is a pretty innovative project and we are really excited about it.”

In addition to providing targeted treatment by going directly to cancer sites, binding RNA to rod-shaped nanoparticles packs a punch because of their surface area.

“Cancer takes many thousands of people’s and animals’ lives every year, so you can’t play at that — you have to dedicate everything you have. And then maybe, just maybe, you can make a difference.”

— Robert DeLong

“Nanoparticles are counterintuitive because they’re super tiny but have a comparatively large surface area, which means you can load a bunch of RNA or other anti-cancer drugs and proteins onto the nanoparticle, like loading aircraft onto an aircraft carrier,” DeLong said. “This effectively concentrates the medicine in a very small area, which makes the therapy more effective.”

DeLong conducts this research with four undergraduates, two Doctor of Veterinary Medicine students, one doctoral student and a laboratory technician. He has trained about 60 undergraduates, many of whom have published and been accepted into medical schools.

“They’ve had tremendous success not because of me, but because engaging them in research got them excited about medicine,” DeLong said. “I went into science because I did undergraduate research and had a fabulous mentor. I hope I can give that back.”

Before moving to academia, DeLong worked for biotechnology corporations. He transitioned to academia in order to dedicate all his working hours to cancer research. Although tenured at another university, he moved to Kansas State University to join the Nanotechnology Innovation Center of Kansas State.

“I’m really appreciative of this opportunity to roll up my sleeves and fight against cancer all day, every day,” DeLong said. “The interdepartmental partnerships at K-State offer very unique opportunities that don’t exist anywhere else, so we can work with faculty and scientists from other disciplines and come at cancer from different angles.”



Programs to advance K-State cancer research and education are made possible by **private donations.**

Learning from the body's natural soldiers to fight cancer on the nano-level

By Tiffany Roney

A troop of soldiers in every human body stands at attention, ready to guard healthy cells and find and destroy anything harmful. These service-minded soldiers, also known as immune cells, are inspiring a Kansas State University researcher to develop better cancer treatments.

Santosh Aryal, assistant professor of chemistry, is working with Arunkumar Pitchaimani, postdoctoral researcher in anatomy and physiology, and Tuyen Nguyen, doctoral student in chemistry, on the study, "Natural killer cell membrane infused biomimetic liposomes for targeted tumor therapy," which was recently published in *Biomaterials*.

Natural killer cells are the immune cells in our body that naturally seek and destroy diseased cells, including cancer cells, said Aryal, who is studying new methods to use strategies similar to immune cells' processes to deliver targeted treatment, thereby decreasing side effects and accelerating healing.

"The main problem with current cancer therapies is that when the doctor gives the drug to the patient, it goes everywhere throughout the body," Aryal said. "If we could take advantage of the immune cell's patrol methods to target and deliver treatment precisely to the cancer cells, that would be fantastic."

Aryal's research includes both active and passive targeting methods.

With active targeting, the treatment would be delivered directly to cancer cells through biodegradable nanoparticles, which Aryal is engineering with natural biomaterials, including polymers and phospholipids. This method minimizes absorption of anti-cancer medicine into vital organs, where the drugs could become toxic. An Innovative Research Award from the Johnson Cancer Research Center helps cover the costs of this project.

With passive targeting, the medication would not go specifically into cancer cells but rather into any tissues in the body. However, because

blood vessels in most cancer tissue are more porous than vessels in normal tissue, they naturally soak up more of the treatment.

"Both active and passive targeted therapies are more precise and have a better effect than regular chemotherapy, which radiates free molecules," Aryal said. "The methods we are studying help diminish toxicity and heal the body faster."

Aryal uses a live imaging system to monitor how much treatment is released into which parts of the body. An Equipment Award from the cancer research center was key in his laboratory's ability to purchase the system.

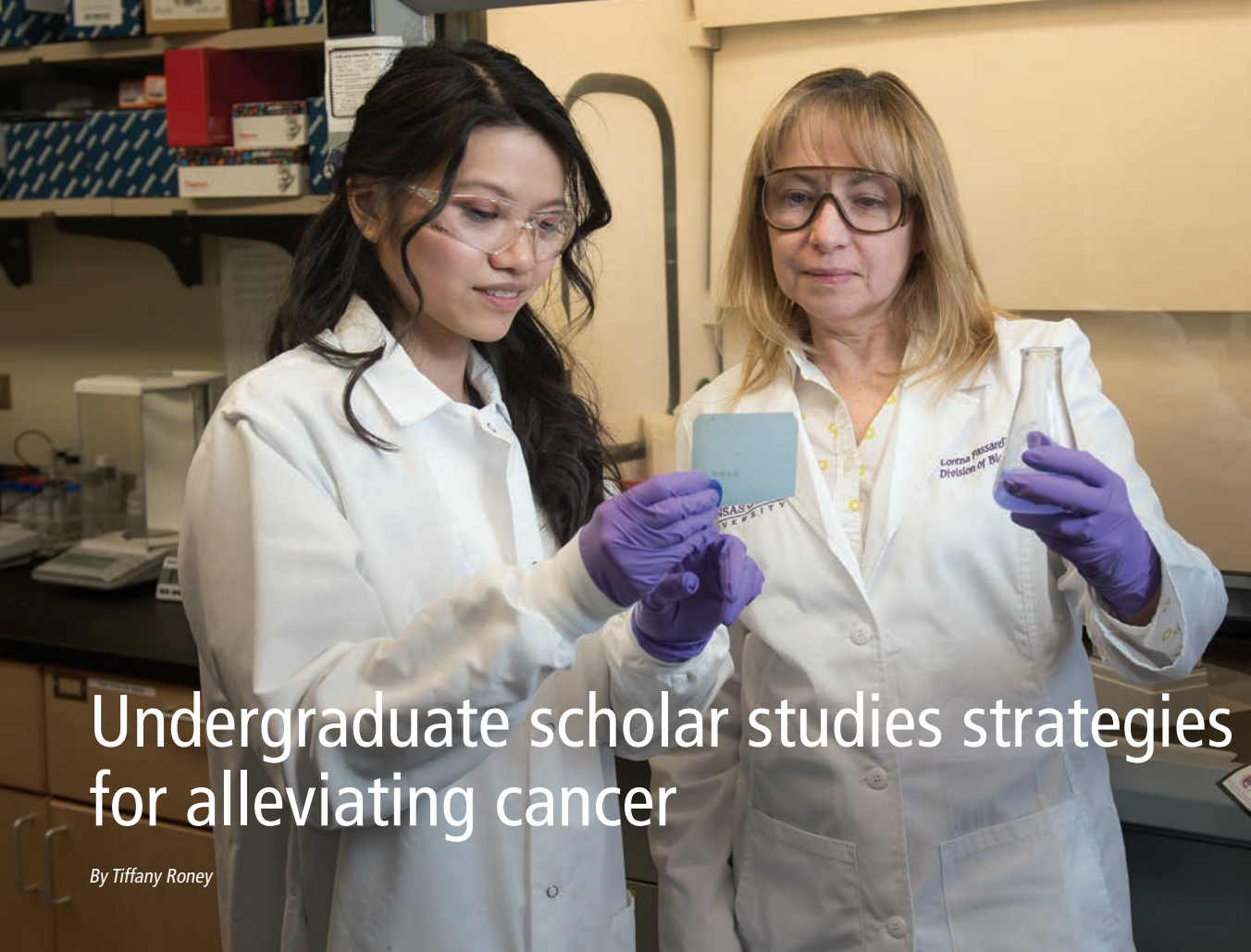
"I have great appreciation for the Johnson Cancer Research Center for helping provide the live imaging system and cover our research costs," Aryal said. "This work would not be possible without it."

Aryal's projects are based in the Nanotechnology Innovation Center of Kansas State, where

his team includes four graduate students, one undergraduate student, a postdoctoral researcher and a volunteer with a biochemistry bachelor's degree.

"Getting to work with nanomaterials that are useful for many biomedical applications is very exciting," said Ramesh Marasini, a doctoral student in chemistry who is researching nanoparticles that can convert light into heat for photothermal cancer therapy. "I am very happy to work with Dr. Aryal because he is helpful, and I am proud of the people who donate to the Johnson Cancer Research Center so that we can do this research."

Outside the lab, Aryal's team has led science activities for Boy Scouts and presented about nanomedicine to middle school students at events with the University of Saint Mary in Leavenworth, Kansas, and K-State's Girls Researching Our World, or GROW, program.



Undergraduate scholar studies strategies for alleviating cancer

By Tiffany Roney

As a senior at Kansas State University, Kathlyn Gomendoza has three years of research under her belt, thanks to undergraduate research awards from the Johnson Cancer Research Center and other sources.

Gomendoza, who is scheduled to graduate in May with a bachelor's degree in biology, has conducted research since the second half of her freshman year, including full time in summer 2017 in the laboratory of Lorena Passarelli, professor of biology.

"Kathlyn is very knowledgeable about her basic cancer research project, and she is outstanding in her ability to think critically about the procedures she undertakes and evaluating data," Passarelli said.

Under Passarelli's guidance, Gomendoza is researching the role of sulfhydryl oxidation in the cytoplasm of cells during virus replication. Sulfhydryl oxidation is the formation of disulfide bonds in proteins.

"When this process occurs in the cytoplasm of cells, it may aggravate cancer pathology," Gomendoza said. "Our studies in a simple viral model may shed light into the oxidation processes, helping our understanding of cancer pathologies."

Also in Passarelli's lab, Gomendoza studies the replication of baculoviruses, which are virulent to insects but not humans. Baculoviruses have been instrumental to the development of vaccines, including the bivalent vaccine of proteins from human

\$1,493,500

has been invested in undergraduate research training since 1980.

papillomavirus types 16 and 18, viruses that cause cervical cancers. Thus, studying replication of baculoviruses will help in developing other vaccines and therapeutic agents.

"Learning about baculovirus stability via sulfhydryl oxidation of viral proteins is essential for developing more efficient baculovirus-based vaccines and other therapeutic agents," Gomendoza said.

She realized her interest in cancer research and potentially becoming a medical doctor when she visited K-State while a high school student at Trinity Academy in Wichita, where she graduated in 2014.

"That's when I knew I wanted to do cancer research, but I didn't know where to begin until I joined Dr. Passarelli's lab," Gomendoza said. "Doing research has been exciting because I get to learn things no one has discovered before. And when you realize all of it can help people who have diseases like cancer, then it's even more fulfilling."

Without support from organizations including the Johnson Cancer Research Center, Gomendoza would not have the privilege of prioritizing hours in the laboratory. So, she is thankful for the center's funding, which allows her to focus on furthering cancer research.

"The center's undergraduate Cancer Research Award supports the experience I can't get sitting in class, and I appreciate the opportunity to expand my knowledge in the field," Gomendoza said. "The center is committed to support undergraduates in fighting cancer with relevant basic research."

Gomendoza is a member of the University Honors Program and the American Society for Microbiology, and she is a peer mentor in the Developing Scholars Program. She was the Division of Biology's Most Promising Student in 2017 and received an honorable mention for the national Barry M. Goldwater Scholarship in 2017.

She also has received research fellowships and scholarships from the American Society for Microbiology, Kansas IDeA Network of Biomedical Research Excellence, Kansas Louis Stokes Alliance for Minority Participation, various K-State entities and more.

Big dreams

Undergraduate wants to save lives through medicine and research

By Marcia Locke

Vaithish Velazhahan, a senior in microbiology, medical biochemistry and pre-medicine at Kansas State University, is working hard to make his dreams a reality.

Growing up in India, Velazhahan saw people with treatable illnesses kicked out of hospitals because they couldn't afford the services. While a heartbreaking occurrence, it also inspired him. He has two big dreams: to become a physician-scientist and to make health care more accessible.

Thanks to hard work and support, including three undergraduate Cancer Research Awards from the Johnson Cancer Research Center at K-State, he is well on his way to achieving both.

Velazhahan never planned on leaving India to attend a university. However, despite scoring very high on the nation's medical entrance exam, he couldn't attend government-sponsored medical school because he wasn't an Indian citizen, and his family couldn't afford private medical school.

So, he returned to his birthplace, Manhattan, Kansas, where his father had been a postdoctoral researcher at K-State until Velazhahan was 1 year old.

"Coming to K-State was the best decision I could've made because the impact it has made on my life I don't think I would've gotten that anywhere else," Velazhahan said. "Everybody really cares about me, and the type of attention K-State gives its students is really terrific."

Velazhahan started working in a laboratory right away. He currently studies dietary flavonoids with Kathrin Schrick, associate professor in the Division of Biology.

Flavonoids are compounds abundantly found in fruits and vegetables. They have anti-cancer and other health-promoting properties, and research has shown they can cause cancer cell death.

Velazhahan's research focuses on the flavonoid Fisetin, which is found in strawberries and blueberries. He said his main goal is to

gain mechanistic insight into how exactly this compound works in tumor suppression.

He has uncovered that Fisetin causes cell death by directly interacting with the transcription factor HSF1 and changing its conformational dynamics. Transcription factors are master regulators of genes, and HSF1 controls several genes that are overexpressed in cancer cells, according to Velazhahan.

"Flavonoids are both safe for human consumption and known to kill cancer cells, so we need to understand how they work so we can design drugs that mimic them but are more efficient," Velazhahan said.

Velazhahan appreciates the Johnson Cancer Research Center's support, which included an Innovative Research Award for Schrick, allowing her to make this research a priority for her lab.

"Without that funding, I don't think our cancer research would've gotten started — or at least not the same momentum," Velazhahan said.

Velazhahan's love for research inspired him to broaden his medical career dream and also become a structural biologist.

"In science, when discoveries and the treatments they lead to work, you are making this huge impact you couldn't make as just a medical doctor seeing patients," Velazhahan said. "Plus, I want to be part of the entire pharmaceutical pipeline, translating basic science into clinical discoveries and making sure they reach the most vulnerable people."

Velazhahan is already working to reach vulnerable people. He has started a charity called We Save. His philosophy is that no one doctor can help hundreds of people for free, but many doctors could help a few patients each. We Save is developing an app to connect volunteer doctors with needy patients.



\$100,000

a year goes toward training 50 undergraduates to do scientific research.

Velazhahan has received many honors and awards, including the Barry M. Goldwater Scholarship and scholarships from the National Science Foundation and National Institutes of Health Kansas-INBRE program.

He attributes much of his success to Schrick, who, he says, has been influential in his growth as a scientist.

"Without Dr. Schrick, I wouldn't have gotten this far," Velazhahan said. "She not only allowed me to work on research that was new to her lab, she even found me funding and co-advisors. She does excellent research, but also makes sure her students are successful too."

Velazhahan has received a prestigious Gates-Cambridge Scholarship for doctoral studies in the MRC Laboratory of Molecular Biology at Cambridge University in England. He plans to attend medical school in the U.S. after he completes his doctoral program.



True leaders

Researchers' findings about Poly(A) leader could improve therapies for cancer and infectious diseases

By Tiffany Roney

Scientists with the Johnson Cancer Research Center at Kansas State University have made a discovery that could lead to improved targeted therapies for cancer and many viruses.

Messenger RNA is the template to produce proteins in all organisms. Poxviruses, which can infect people, other mammals and some reptiles, use a poly(A) leader in their messenger RNA to synthesize more proteins, according to the researchers' study published in PLOS Pathogens.

The ability of poxvirus to produce poly(A) leader in its messenger RNA is essential for its survival, according to the study's lead author, Pragyesh Dhungel, doctoral student in microbiology.

Dhungel works with Zhilong Yang, assistant professor of biology and the study's principal investigator. Yang is an affiliate of the Johnson Cancer Research Center, which has awarded him and his team multiple Innovative Research Awards, undergraduate Cancer Research Awards and Graduate Student Summer Stipends.

"These findings are exciting because they could be used for developing new therapies for many cancers and other diseases," Dhungel said.

In the war against dangerous poxviruses, such as smallpox and monkeypox viruses, a poly(A) leader can be a kind of trump card. Human cells do not have or need it, while poxviruses need it to continue synthesizing proteins when their other synthesizing methods are impeded, according to Dhungel, Yang and co-author Shuai Cao, postdoctoral researcher in biology.

\$112,894

supported graduate students who will lead the next generation of cancer research.

Every gift helps, and last year, **96%** of donated funds came from gifts of less than **\$1,000.**

Dean emeritus C. Clyde Jones serves others by funding undergraduate cancer research awards

By Tiffany Roney



One of the newest scholarships offered by Kansas State University's Johnson Cancer Research Center was established by a longtime K-State faculty member and local philanthropist in honor of his wife, a cancer survivor who died in 2016.

C. Clyde Jones recently established the Margaret

"Midge" Jones Memorial Cancer Research Fund for undergraduate research. The endowed fund will support the faculty-led research training of undergraduate students.

"I love the center's undergraduate program because it helps young people form career choices early on," Jones said. "They develop an interest in cancer research, which helps them determine their career choices."

This fund is Jones' second endowed fund. He and his wife established the Karen Eileen (Jones) Prevette Memorial Cancer Fund in 2004 in honor of their daughter Karen, who had died from cancer earlier that year. The fund also honors his wife's brother, John Moren Scheldrup, and Jones' sister, Eileen Jones Luck, both of whom died from cancer. Ten students have benefited from this fund so far.

Jones also has a daughter, Kristin Schoeff, of Columbus, Ohio, and a son, Dr. Clifton Jones, an infectious disease specialist in Topeka, Kansas. Clifton Jones is following in his father's footsteps, serving on the Johnson Cancer Research Center's advisory council. Father and son continue their family tradition of presenting their awards at the center's annual Undergraduate Cancer Research Awards Banquet.

As the first dean and a professor emeritus at Kansas State University's College of Business Administration, Jones has applied his marketing skills to raise funds for Shepherd's Crossing, a ministry that offers budget counseling, referrals and financial support to area residents. He has helped increase its donations from \$100,000 to more than \$400,000. One of the ministry's biggest fundraisers is one named for Jones, the annual C. Clyde Run/Fun Run/Walk.

"I've just benefited so much from being able to be of service," Jones said.

Midge Jones, who passed away May 1, 2016, also volunteered with several organizations and was known for wanting to improve others' lives. Jones hopes the scholarship reminds people to appreciate her qualities.

"She was one of the most kind and loving people I've ever known," Jones said. "People who knew her would comment about her continuous smile. She always made people feel special. She had an outward-giving spirit, and the cancer scholarship really fosters that."

In addition to the desire to honor his wife's memory and experience joy in giving, Jones said there is a deeper reason for him to establish scholarships and invest in philanthropy.

"A Christian is expected to be a servant, and how you define the role of a servant depends on your capabilities, qualities and educational background," Jones said. "In my case, not-for-profit management and scholarships have become fitting ways to serve others."

The Jones family's legacy will help many outstanding K-State students, who will in turn serve society as researchers, doctors, nurses and more.

"If we can stop a poxvirus's use of poly(A) leader, we can kill the virus," Cao said. "This could help develop a novel anti-poxvirus strategy, which could be very important for finding cures for infections and diseases."

This relates to cancer because a poly(A) leader is present in vaccinia virus, which can be engineered to selectively infect and kill cancer cells, Dhungel said.

Adding poly(A) leader to any messenger RNA can increase the expression of that gene in vaccinia-infected cells, which means a poly(A) leader could potentially be used in medication to improve vaccinia-based cancer therapy in the cells it needs to target, Dhungel said.

"For example, if we use specially engineered vaccinia that overexpresses the channel protein used in the uptake of chemotherapy agents, it will express more of those channels only in the cancer cells," Dhungel said. "By doing so, the cancer cells will take in more of the treatment, allowing the therapy to specifically target cancer cells but leave normal cells alone."

Along with a Graduate Student Summer Stipend from the Johnson Cancer Research Center, the National Institutes of Health also supported Dhungel's research.

"I am grateful to partner with the Johnson Cancer Research Center and Dr. Yang to find out new things that could help lead to cancer treatments," Dhungel said.

Understanding cancerous processes through nuclear magnetic resonance

By Tiffany Roney

For any fight, important tools are needed, whether those tools are swords or pens.

In the case of the fight against cancer, Om Prakash's primary weapon is nuclear magnetic resonance, or NMR, in the form of a \$1 million device that is similar to an MRI machine.

The NMR technology allows Prakash, professor of biochemistry and molecular biophysics, and his research team in the Mary L. Vanier Biomolecular NMR Core Laboratory to work with proteins in forms that are closer to their functional states than other methods allow.

"NMR is well-positioned to play a crucial role in developing better-tailored cancer medicine," said Prakash, who has co-authored more than 100 papers in *Protein Science*, *International Journal of Protein and Peptide Research*, *Journal of Biological Chemistry* and other journals.

Prakash said his accomplishments would not be possible without students like Hawa Demebele, sophomore in biochemistry, and Lynn Schrag, doctoral student in biochemistry, both of whom are partially funded by the Johnson Cancer Research Center.

"It's a special opportunity to work in this kind of lab because Dr. Prakash, Lynn and Alvarro Herrera, the lab manager, are super friendly and always willing to help," Demebele said. "The studies I do in this lab are especially valuable to me as an undergraduate because they help me understand how proteins interact within the human body."

Demebele and Schrag are studying a stress-response peptide found in insects that has a structural similarity to the human epidermal growth factor. The growth factor's receptor is often co-opted in cancer cells, Schrag said.

"Studying how the protein's structure works in bugs could shed light on how to target the human receptor," Schrag said. "If cancer cells are using excess growth factor on their receptors, it might interfere with the natural growth process, possibly through peptides like the ones I'm studying now."

Schrag is using a grant from the Johnson Cancer Research Center to study p53-TAD, a peptide that is a major factor in regulating cell survival. In healthy cells, p53-TAD tells cells to keep dividing, but if DNA becomes damaged, it sends a different message.

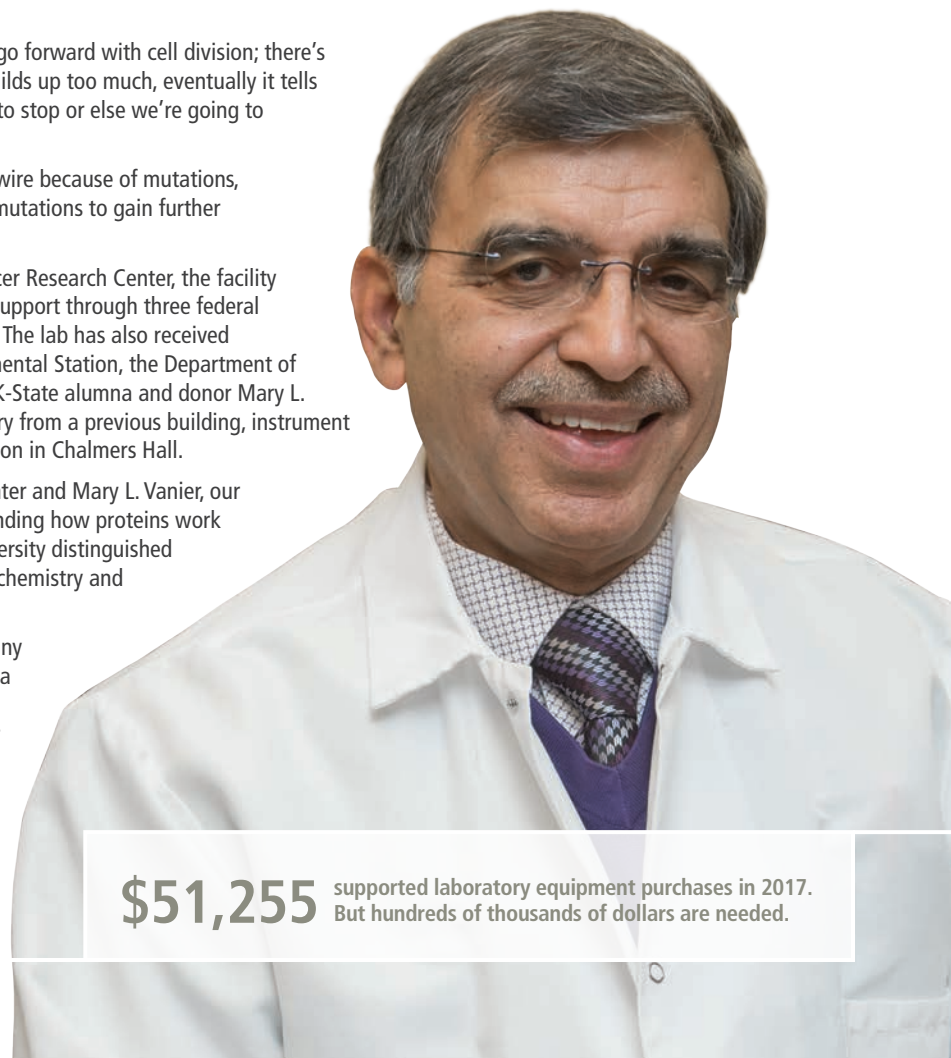
"In that case, it tells your cells, 'Whoa, don't go forward with cell division; there's something wrong here,'" Schrag said. "If it builds up too much, eventually it tells the cell, 'We've had a good run, but it's time to stop or else we're going to become cancerous.'"

In many cancers, this halting signal goes haywire because of mutations, so Schrag is working to study those peptide mutations to gain further understanding for future cancer research.

In addition to funding from the Johnson Cancer Research Center, the facility has recently received collaborative research support through three federal grants from the National Institutes of Health. The lab has also received funding from the Kansas Agricultural Experimental Station, the Department of Biochemistry and Molecular Biophysics, and K-State alumna and donor Mary L. Vanier, who funded the move of the laboratory from a previous building, instrument upgrades and setup in the lab's current location in Chalmers Hall.

"Thanks to the Johnson Cancer Research Center and Mary L. Vanier, our NMR facility is opening the door to understanding how proteins work at molecular levels," said Phillip Klebba, university distinguished professor and head of the Department of Biochemistry and Molecular Biophysics.

"This knowledge is key for understanding many biological processes, including cancer," Klebba said. "We hope the understanding we gain through this lab will eventually lead to better cancer treatments."



\$51,255 supported laboratory equipment purchases in 2017. But hundreds of thousands of dollars are needed.

Pink power

Center's eighth annual luncheon celebrates, informs community about breast cancer survivorship

By Marcia Locke

We've come a long way since the days when the only answer to a breast cancer diagnosis was radical surgery or death. More people — even men — are surviving breast cancer than ever before, and with less invasive treatments, thank to decades of research.

This was the message Peggy Johnson shared in her talk, "Research and Breast Cancer Survivorship," at the eighth annual Pink Power Luncheon Oct. 11, 2017. Johnson is a breast cancer survivor and the executive director and chief operating officer of the Wichita Medical Research and Education Foundation.

The Pink Power Luncheon, which takes place in October in recognition of Breast Cancer Awareness Month, informs community members about breast health, health care resources and cancer risk reduction. It is co-sponsored by Kansas State University's Johnson Cancer Research Center and Susan G. Komen's Kansas affiliate, with support from Holiday Inn at the Campus.

Johnson addressed the luncheon's nearly 200 attendees, reminding them that early detection is key. She said when breast cancer is discovered and treated early, it is often survivable.

Johnson knows breast cancer survivorship better than most. Not only has she fought the disease herself, she also helps Komen fight it as a member of its board of directors and its Advocates in Science program steering committee, for which she reviews research grant applications and works with the research community to further breast cancer research. She has also testified before Congress about funding for research and access to health care.

The luncheon audience, adorned in pink as a show of unity against breast cancer, included cancer survivors, caretakers and others who hope for continued success in decreasing breast cancer mortality and improving treatment and side effects. The event offers them an opportunity to get together, learn and celebrate pink power.

In the audience were about 45 breast cancer survivors. Their presence served as a reminder that cancer can happen to anyone — and indeed happens to too many — but also that many survive it. The breast cancer survivors were recognized with pink roses courtesy of Kistner's Flowers.

Presentations, tours, events and information are provided to educate about cancer, risk reduction and research.

In addition to an Italian-themed lunch and pink dessert, guests received souvenir goody bags filled with information and other items. They also had the opportunity to visit exhibits from the Kansas Early Detection Works program, Riley County Health Department, Knitted Knockers, Via Christi Imaging and Midwest Cancer Alliance. A few lucky guests won door prizes.

The Pink Power Luncheon allows the Johnson Cancer Research Center, whose mission includes outreach, to go beyond research and serve the community. The center strives to inform people about cancer and risk reduction and, ultimately, help decrease breast cancer mortality through education.



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Cancer Research Departments and Units

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Electrical and Computer Engineering
Engineering Extension
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Veterinary Diagnostic Laboratory

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