

K-State's multidisciplinary approach to cancer research

THE JOHNSON CANCER CENTER is committed to its vision: taking a leading role in conquering cancers in our time. Its advisory council, affiliated faculty and students, staff and thousands of supporters all serve in the fight against these diseases that touch so many of our lives. Established by its namesake in 1980, the center, now under the direction of Dr. Rob Denell, has grown from humble beginnings to become a tremendous source of pride for K-State and the State of Kansas.



Unique for existing at a university without a medical school, the center is the hub to a network of nearly 60 affiliated faculty members, and their student protégés, conducting cancer-related research in the Colleges of Arts & Sciences, Veterinary Medicine, Human Ecology and Agriculture. This multidisciplinary approach is encouraged by the center as it supports and enhances its research programs and educational experiences through competitive financial award programs.

Goals

- To improve cancer-related research and education
- To provide scholarships and fellowships
- To enrich the student experience
- To educate citizens about cancer and cancer research at K-State

Conquering Cancer

SINCE 1980, the cancer center has helped new faculty perform preliminary research to enable them to gain national funding; trained generations of cancer researchers; and provided the public with information about cancer risk, prevention and research at K-State. Thanks to thousands of supporters, the center has succeeded in meeting its mission, not only to provide funds, but also to stay abreast of the ever-increasing cost of the fight against cancer.

Between 1997 and 2002, supporters gave \$4.5 million, achieving our goal of having a campus presence where the center would be visible to the public, faculty and students. Chalmers Hall is a new facility that houses the center offices and the laboratories of many cancer researchers.

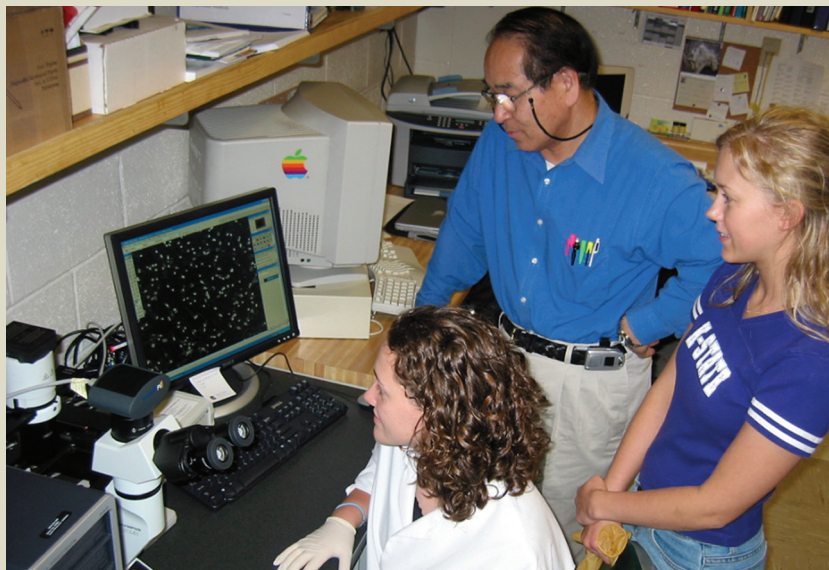
A most crucial approach in our fight is to recruit promising new cancer researchers. We are in the process of recruiting a senior faculty member, to fill the Alice D. Fiedler Distinguished Professor in Biology. In addition, we are supporting a three-year position for a new Johnson Cancer Center Assistant Professorship, with the help of the College of Arts and Sciences and the central administration.



Rob Denell,
distinguished
professor of biology
and director

Using a multidisciplinary approach, affiliates from across campus are working together, seeking solutions. The path from the laboratory to the patient is long and complicated, but with continued support of our donors, we are taking a leading role in curing cancer in our time.

— Rob Denell, distinguished professor of biology and director



Courtesy Center for Basic Cancer Research

Masaaki Tamura (top), associate professor of anatomy and physiology, is shown working with Cancer Research Award winners Jennifer Reischman (left) and Kathryn Miller (right). Tamura has shown the protein hormone angiotensin II is important for the growth of lung and colon tumors, and is studying how its effects might be used to develop new chemotherapeutic strategies.

Supporting faculty, students and the public

RESEARCH

From zebrafish genes, umbilical cord stem cells and obese mice to nanoparticles, antioxidants and drug development, K-State basic cancer researchers are conquering cancers from many different angles.

New drugs can't be created, or clinical trials conducted, without the fundamental knowledge that is first gained from basic research. Such research provides the basis for understanding cells, cancer formation and more.

Cancer center affiliates are from many disciplines. Developmental geneticists, Sue Brown, associate professor of biology, and Rob Denell, distinguished professor of biology and director of the Terry C. Johnson Center for Basic Cancer Research, use the red flour beetle to study genes that are important to human development and can be relevant to cancer formation. Deryl Troyer, professor of anatomy and physiology, is investigating the use of noncontroversial umbilical cord stem cells to kill tumor cells. Ron Madl, director of the Bioprocessing and Industrial Value Added Program, Dolores Takemoto, professor of biochemistry, and George Wang, associate professor of human nutrition, study the cancer-fighting powers of antioxidants in different varieties of wheat. Professors of chemistry Christer Aakeröy and Stefan Bossmann and assistant professor of chemistry Viktor Chikan study chemical, photodynamic and magnetic nanoparticles as approaches to cancer treatment. Veterinary Medicine affiliates conduct studies such as evaluating normal versus cancer cell function and tumor progression and metastasis.

As researchers earn patents, international recognition and millions of dollars a year in extramural



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Chris Thorpe, assistant professor of biology, received an Innovative Research Award and an equipment grant to support his genetic studies with zebrafish. He studies how cells communicate, working with the mechanism called the Wnt signal transduction pathway that involves a gene originally discovered in both the fruit fly and a human breast cancer.

funding, the cancer center strives to further enable their success by augmenting their financial resources. Affiliated scientists receive funding for seed grants, technical support and training.

EDUCATION

Training the next generation of cancer researchers is important to the center's mission. The center provides graduate students with funds to pursue their research in the summer and to make presentations at professional meetings.

More than 600 undergraduate students have received Cancer Research Awards, a program that encourages students to get involved in cancer research projects with affiliated researchers. Many students have reported that this is a pivotal experience in their time at K-State.

"This undergraduate program is literally unparalleled in public universities in the U.S.," said council member Bob Kinders. "It provides the opportunity for young students to get hands-on experience in scientific research. The caliber and accomplishments of the students who complete the program are exceptional for any university, public or private."

OUTREACH

The center has increased emphasis on community outreach programs. Center staff participate in a variety of community activities and events, as well as being involved in many collaborative efforts to educate the public about cancer risk, prevention and research at K-State.

A recent accomplishment is the development of a pamphlet called "When a friend has cancer ... 50 Ways to show you care." Written by The Cancer Resource Network of Manhattan, designed by the New Boston Design Creative Group of Manhattan and produced by the center, this booklet is now available to the public.

Children need answers too. "A Day with Dr. Waddle" is a coloring, activity book, written by center staff in 1988 and later translated into Spanish. The booklet helps adults talk to children about science, research, cancer and good health habits. It is a proven resource for families dealing with cancer, and the difficult discussion about the illness of a loved one or friend.

Visitors are welcome to tour the center anytime, to see research labs and learn firsthand how basic research is helping fight cancer.



In lieu of flowers

Instead of sending flowers to Jim Ronen as he recovered from cancer surgery, close friends made a gift to the Johnson Cancer Center in Jim's honor.

It was this introduction to K-State's campuswide approach to cancer research that prompted Jim and his wife, Cibyl Teichman Ronen '60, also a cancer survivor, to consider their own philanthropic legacy.

The Ronens have quietly committed two substantial gifts to K-State. Their generous deferred gifts establish a permanent fund for cancer research and an endowment for general scholarships.

Jim and Cibyl believe an investment in K-State's cancer research programs is far better than sending flowers. "Most people would find it more thrilling to fight the disease itself than to give flowers that will eventually die," Jim said.

Jim graduated from Emporia State Teachers College in 1960. After marrying in 1962, Jim and Cibyl made their home in St. John,



Courtesy Center for Basic Cancer Research

Jim and Cibyl Ronen, St. John, Kan., have established an endowed fund with the center that will ensure the programs continue into the future.

Kan., where Jim actively worked in the First National Bank and Trust of St. John for 44 years and was president of the bank before retiring in 1994. Cibyl was then bank travel director for ten years. She served on the board of directors, while Jim was chairman of the board until the bank sold in 2004.

Both Cibyl and Jim now serve on the center's Advisory Council. They encourage all alumni and friends to invest in the cure at K-State in lieu of sending flowers.

Sunny 102.5 FM, Bill Snyder's 10-year partnership benefits cancer research

SINCE 1995, Sunny 102.5 FM has teamed up with former K-State head football coach Bill Snyder. Together, they have raised more than \$145,000 for cancer research, education and outreach.

Even in retirement, Snyder maintains his strong support of the cancer center by serving on the Advisory Council and acting as chair and teammate of Sunny 102.5 FM in their quest to raise funds for the center.



Bill Snyder, former K-State head football coach

This winning team has fielded a successful fund-raising campaign each fall. Sunny also promotes the center at Manhattan's Purple Power Play on Poyntz pep rally each fall, airs public service announcements all year for cancer awareness campaigns, offers free ads and live broadcasts for center activities and events, like the annual Rob Regier golf tournament for cancer research. Sunny even has the center's logo on its van, so wherever it goes, the center is recognized!



Courtesy Center for Basic Cancer Research

CANCER RESEARCH AND EDUCATION ADVISORY COUNCIL

Left to right: Jim Haymaker '69, Edina, Minn.; Jim Ronen, St. John, Kan.; Brent Benkelman, Manhattan, Kan.; Bill Snyder, Manhattan, Kan.; Cibyl Teichman Ronen '60, St. John, Kan.; John Carlin '62, Manhattan, Kan.; Sandy Embick Regier '64, Overland Park, Kan.; Bev Lueers '76, Topeka, Kan.; Mary Jo Heyka, Manhattan, Kan.; Clay Harvey '74, Topeka, Kan.; Judy Lukins Schrock '70, '81, Manhattan, Kan.; Rob Denell, Manhattan, Kan.; Mary Vanier '89, Manhattan, Kan.; Bob Kinders '80, Wakersville, Md.; and Ed Petrik, Topeka, Kan. Not pictured: Charlie Bascom '86, Hamilton, Ohio; Clif Jones '77, Topeka, Kan.; Earl Kvasnicka, WaKeeney, Kan.; Patty Pendleton Wheeler '53, Caney, Kan.; Lorene Oppy, Jack Ryan '74, Thelma Soper and Bill Stamey, all from Manhattan, Kan.

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