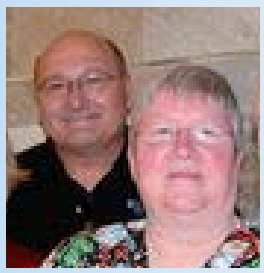
UNC Lineberger Comprehensive Cancer Center

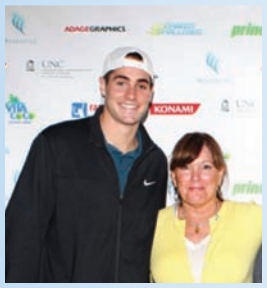
cancerlines

Winter 2011

UNC LINEBERGER

line up the inside





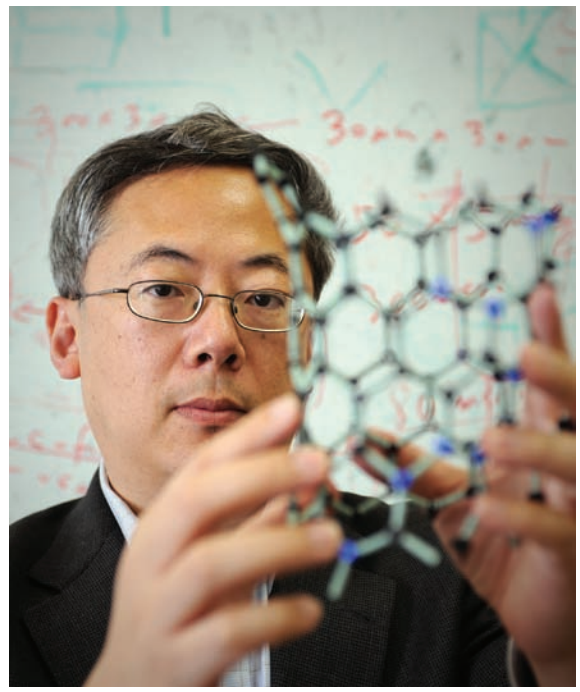
UNC CANCER CARE

Startup companies address unsolved problems

In their recent book, *Engines of Innovation*, UNC Chancellor Holden Thorp, PhD, and Entrepreneur-in-Residence Buck Goldstein make the case for the pivotal role of research universities as agents of societal change – confronting global challenges that can't or aren't being addressed by government or industry.

At UNC Lineberger, that challenge resonates with our physicians and scientists, who work to unravel the mysteries of cancer and related health problems. The drive to get great ideas from the lab to the patient often involves a shift from the mind to the marketplace – resulting in entrepreneurial approaches to commercializing new ideas in diagnostic technology and therapies with tremendous potential to help cancer patients, while simultaneously boosting North Carolina's knowledge economy.

These companies range from early stage startups to more mature organizations, like Liquidia Technologies (www.liquidia.com), founded by Joe DeSimone, PhD, UNC Lineberger Member and Chancellor's Eminent Professor of Chemistry at UNC, that already have moved promising therapies into early stage clinical trials.



Otto Zhou, founder of the startup companies XinRay and Xintek, examines a model of a carbon nanotube that is the basis of new tumor imaging technologies

With more than 20 active startups involving UNC Lineberger members in existence, and more likely to come as a result of new faculty and new research made possible through the University Cancer Research Fund, we have space to showcase just a few examples of some of the early-stage companies creating powerful entrepreneurial momentum with the potential to benefit thousands in North Carolina and worldwide.

XinRay and Xintek – tiny inventions with big results

A tiny invention called a carbon nanotube field emitter, perfected by UNC physicist Otto Zhou, PhD, is well on the way toward showing big promise for new technologies that can help cancer patients and others. Xintek, a UNC spin-off, seeks to commercialize carbon nanotube electron field emission technologies developed at UNC into applications ranging from x-ray generation to information display.

One new system, which the companies and researchers at UNC are working collaboratively with an outside partner to develop, promises better spatial resolution and a faster scanning speed compared to current technologies for the detection of breast tumors.

A related company, XinRay Systems, LLC, was formed about three years ago as a joint venture between Siemens Medical and Xintek. Based in the Research Triangle Park, the company is developing a carbon nanotube-based x-ray technology for both medical and homeland security applications.

One very promising application is image guided radiation therapy, which provides high-quality 3D images.

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Traci Martinez, RN, served as a magnet champion and says nurses at the N.C. Cancer Hospital are an outstanding team

Oncology nursing staff reflects excellence of UNC's Nurse Magnet designation

In November, the American Nurses Credentialing Center's (ANCC) Magnet Recognition Program® announced that UNC Hospitals is now of one of only 378 health care facilities in the world to earn Magnet® designation.

The Magnet Recognition Program recognizes health care organizations that demonstrate excellence in nursing practice and adherence to national standards for the organization and delivery of nursing services. Applicants undergo a rigorous evaluation that includes extensive interviews and review of nursing services.

The nursing staff at the N.C. Cancer Hospital was involved in the process at all levels, according to Meghan McCann, RN, MSN, NE-BC, Director of Oncology Nursing Services, "The designation is recognition for our nursing professionals for the great work they are doing and the level of leadership they have at the N.C. Cancer Hospital. A number of examples in the 1800-page Magnet document were initiatives started at the cancer hospital and reflect ongoing programs we

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director's message

When times are easy, we take success for granted. As I look around at today's more challenging environment, I'm even more proud of what we are accomplishing at UNC Lineberger and with the UNC Cancer Care team. We have world-class faculty and staff and their teamwork – pulling together the threads of research, innovation and top-notch cancer care in tough funding times – is creating extraordinary results.

I hope you'll take the opportunity to read more about how our researchers are creating new teams, founding companies that bring the economic benefits of entrepreneurship as well as life-saving ideas from the mind to the marketplace.

UNC's superb, dedicated nursing staff has just been recognized with Nurse Magnet status – a key national recognition that applies to only six percent of hospitals. This designation not only speaks to the excellence of our nurses but also to UNC Health Care's commitment to expanded opportunity for nursing input into all aspects of quality care for our patients.

As part of the University Cancer Research Fund strategic plan, we challenged our researchers to work together in new teams and in new ways to optimize North Carolina's cancer outcomes through an initiative called Health-E-NC. The goal of Health-E-NC is to improve cancer outcomes for the diseases that hit North Carolina's citizens the hardest. Health-E-NC is a statewide effort with a focus on counties where these cancers are common and place a burden on the health of North Carolinians.

Teams were challenged to come together to design projects aimed at finding out what really works in the areas of cancer prevention, early detection, diagnosis, treatment and survivorship and helping to spread the latest and best evidence-based cancer information to health care providers and advocacy groups as well as cancer patients, their families and survivors. Six projects ranging from an effort to increase colorectal cancer screening among Medicaid recipients to a partnership with North Carolina's community colleges in a broad-based cancer prevention effort are being launched this month. Many of these efforts will be shaped by input from the communities and people whose health we hope to improve. We know that health is a key component of vibrant, successful communities and these local partnerships are crucial to achieving this UCRF strategic goal.

As we kick off another promising year at UNC Lineberger, I want to thank all of our donors and supporters who, despite a challenging environment, have stepped up to help us make a difference for cancer patients today and tomorrow and for individuals and families in North Carolina and beyond. We are grateful that you are on our team.

2010 Oncology nursing and clinical services excellence awards

Four staff members were honored by UNC Lineberger with the 2010 Oncology Nursing Excellence Awards and the Clinical Services Excellence Awards.

Ann Fletcher, Sam Sharf and Liz Sherwood each received an Oncology Nursing Excellence Award. Dan Roscicki was recognized with a Clinical Services Excellence Award.

Nurse oncology award winners (left to right): Sam Sharf, Dan Roscicki, Ann Fletcher, and Liz Sherwood

Fletcher, BSN, BS, is a clinical nurse who has worked in inpatient oncology for over 10 years. One colleague cited her as her "role model for leadership, teamwork and patient advocacy." Another said, "She embodies the heart and skill of oncology nursing at UNC."

Roscicki is an oncology administrative support supervisor for the N.C. Cancer Hospital. His responsibilities include purchasing medical equipment, maintaining supply levels, and account payments and documentation. He supervises the registration ground floor area as well as indirectly co-supervises oncology support staff throughout the hospital. A retired Marine, Roscicki has been at UNC for five years. Roscicki was described as the "behind the scenes lynchpin for the move from Gravely to the N.C. Cancer Hospital." In the new hospital, "he keeps a close watch on our outpatient lobby, ensuring that our patients and families are served in a friendly and efficient way during their time with us.

Sharf, RN, BSN, CHTC, is the bone marrow transplant coordinator/quality management coordinator for the UNC Bone Marrow and Stem Cell Transplantation Program. Sharf has worked with the program for eight years. Sharf oversees all facets of the program, ensuring compliance with regulatory standards and critical components to safe and efficient/effective transplantation procedures. Additionally, Sharf recently directed and produced an educational BMT program orientation DVD for patients and families. One of her nominators said, "What sets Sam apart from being a good nurse to being a great nurse is the love for what she does and the effort and time she puts into any project she is part of."

Sherwood, RN, MS, ANP-C, is the coordinator for cancer survivorship programs at UNC Lineberger. Sherwood has been at UNC for over 10 years, and has served in multiple roles within the clinical cancer program. Her nominator said of her, "She is compassionate, bright, inquisitive, very hard working and deeply invested in her patients. She takes seriously her commitment to really be with, and stay with, her patients for the duration of their cancer journey."

Winners receive a $1,500 stipend for professional education activities. The Oncology Nursing Excellence Award is presented in memory of Charmayne S. Gray, an outstanding oncology nurse practitioner who died in an auto accident in 2002. The Clinical Services Excellence Awards have been awarded for the past six years.

Carey elected to Academy of Women

On November 3, 2010, Lisa Carey, MD, was honored by the YWCA of the Greater Triangle as one of 11 new members at the 2010 Academy of Women Awards. Membership in the Academy of Women is a distinguished honor, recognizing remarkable women who excel in their fields while embodying the YWCA mission of eliminating racism and empowering women. She was recognized in the Health and Human Services category.

Carey is the associate professor of medicine, associate director of clinical science for UNC Lineberger and medical director of the UNC Breast Center.

Start ups

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Currently undergoing testing in Sha Chang, PhD's, lab in the Department of Radiation Oncology, the new imaging technology enables even more precise targeting of radiation treatment to pinpoint cancer cells. The preliminary results of device testing, published last year, was awarded the best paper in medical physics in 2009 and the team also received a major award from the American Association of Physics in Medicine.

"We've generated a lot of excitement among people who see broad applications for the technology in clinical medicine," says Zhou.

G-Zero Therapeutics – blocking treatment side-effects

G-Zero Therapeutics is not as far along the path to commercialization, but is making strides in moving solutions to key cancer treatment problems forward. With operations in Research Triangle Park, the company is working on a way to block the negative side effects of radiation and cancer chemotherapy.

The company was founded in 2008 by UNC LCCC member Ned Sharpless, MD, along with Kwok-Kin Wong, MD, PhD, (Harvard Medical School) and CEO John Chant, PhD, (formerly of Genetech) to capitalize on discoveries made and patented by Sharpless' lab at the University of North Carolina, and subsequently licensed to G-Zero.

Many of the side effects of common cancer treatments are due to damage to bone marrow. Often, bone marrow damage limits a patient's ability to receive cancer therapy, resulting in reduced treatment intensity which in turn translates into lower cancer cure rates. The company has discovered a treatment, which can be taken orally, that reduces bone marrow damage from cancer therapies, allowing for the use of higher and more sustained chemotherapy dosing, leading to higher cure rates in preclinical models.

"The two key applications are in cancer treatment and radiological disaster. We have shown that our treatment strategy is effective, even when administered up to 20 hours after exposure to a DNA damaging event such as radiation," says Sharpless, who is also UNC Lineberger's Associate Director for Translational Research.

The research projects leading to discoveries licensed by G-Zero were in part supported by the University Cancer Research Fund. The company also has benefited from working with Carolina KickStart, a program developed by the NCTraCS Institute to help translate lab findings into commercially-viable enterprises, Sharpless notes. The company has been able to leverage this extensive university support to obtain more than $1.5M of government and private funding, with which G-Zero employs several RTP scientists, chemists and other support personnel.

Enci, Inc. – starving the hungry tumor

An early-stage startup powered by research discoveries of UNC Lineberger members comes out of a decade-long collaboration between Cam Patterson, MD, and Nancy DeMore, MD. What do a cardiologist and a surgical oncologist have in common that applies to cancer treatment? Blood vessels.

One of the reasons that tumors are able to grow rapidly is because they create their own network of blood vessels. If the creation of those vessels can be blocked at a cellular level by a drug, the tumor can be 'starved' for the blood it needs to continue rapid growth. The drug bevacizumab is effective in many tumors and serves as proof of concept for the drugs that Enci's founders hope to develop, according to DeMore, who is an associate professor in the division of surgical oncology. However, some tumors are resistant to bevacizumab and don't respond.

The partners developed a technique for microdissection of blood vessels from tumor tissues that allows key proteins to be identified and isolated – resulting in numerous targets for drug discovery. One of those proteins, SFRP2, is overexpressed in tumor tissue and the team's laboratory studies have found that silencing it keeps angiosarcoma – a lethal form of cancer with few treatments – from forming blood vessels. SFRP2 also looks like a promising target for some breast tumors and other forms of cancer.

"We formed Enci to capitalize on these findings and try to move them into the preclinical and clinical studies needed for FDA approval," said Patterson, who is chief of the division of cardiology and director of UNC's McAllister Heart Institute. The team is working with Carolina Kickstart.

"The funding we've received from UCRF and Carolina Kickstart has helped us move several steps toward our goal of conducting Phase I trials in patients," said Patterson.

Demore adds, "The landscape has changed in terms of pharmaceutical development. Large companies don't want to get involved until after Phase I or Phase II trials are complete. It is costly to complete these studies and we felt that we needed to form Enci and raise the funds for the work that needs to be done to close this gap." The original study looking at the mechanism of SFRP2 in blood vessel formation was funded by a UCRF innovation award and a UCRF core facility pilot project funded the preclinical studies confirming that SFRP2 would work outside of cell culture.

UNC Lineberger members are involved in the following startup companies:

AlphaVax, Inc. – Robert E. Johnston, PhD
Asklêpios BioPharmaceutical, Inc. – Richard J. Samulski, PhD
Cell Microsystems – Nancy Albritton, PhD, Christopher Sims, PhD, Yuli Wang, PhD**
Dyzen, Inc. – Cam Patterson, MD, Rob Lineberger, Holly McDonough, PhD**
Enci Therapeutics, Inc. – Cam Patterson, MD, and Nancy DeMore, MD
Epizyme – Yi Zhang, PhD
Ercole Biotech (now part of AVI Biotech) – Ryszard Kole, PhD
Exigent Pharmaceuticals – Matthew Redinbo, PhD
G-Zero – Normal E. Sharpless, MD
Invitrox, Inc. – Don Gabriel, MD
Liquidia Technologies – Joseph Desimone, PhD
MiCell, Inc – Joseph Desimone, PhD
MiCell Integrated Systems (MIS) – Joseph Desimone, PhD
*Morphomics – Edward Cheney, PhD, and Joseph Pizer, PhD**
NanoManipulator – Otto Zhou, PhD (and others)
Novolipid – Michael Hackett and Moo Cho, PhD*
Qualiber – Leaf Huang, PhD
TheraLogics – Albert Baldwin, PhD
Viamet Pharmaceuticals – Holden Thorp, PhD
XinRay – Otto Zhou, PhD
Xintek – Otto Zhou, PhD

*Not members of UNC Lineberger

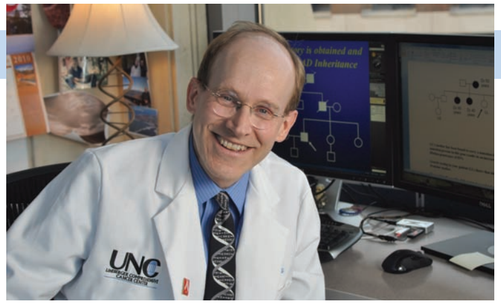
Ting presents 2010 Berryhill Lecture

Jenny Ting, PhD, Alumni Distinguished Professor in UNC's Department of Microbiology and Immunology, delivered the 2010 Berryhill Lecture on November 3 at the Carolina Club. Dr. Ting is the William Rand Kenan Professor of Microbiology and Immunology, founding Director of the Center for Translational Immunology, Co-Director of the Inflammatory Disease Institute, immunology program leader at UNC Lineberger Comprehensive Cancer Center, and Co-Director of the Southeast Regional Centers of Excellence for Biodefense and Emerging Infectious Disease. At the beginning of this year, she became a member of the advisory board for the National Institute of Allergy and Infectious Diseases, one of the 27 Institutes and Centers of the National Institutes of Health (NIH); in this four-year position she will advise the director about the direction of the NIH.

Dr. Ting's passion and commitment to the study of science has stemmed from her desire to make new discoveries, to cultivate young scientists and to procure respect for her field. "Academic scientists have to work very hard; there is no question about it," she says. "However I absolutely love science; I love discovery. I am delighted to see other people come to appreciate the beauty of science."

The Norma Berryhill Distinguished Lecture was established to honor the medical school's "most able scientists and scholars." The lectureship is named after the late Norma Berryhill, whose late husband, Dr. Walter Reece Berryhill, was dean of the school from 1941 to 1964. Along with her husband, she is considered the co-founder of UNC's four-year School of Medicine.

faculty profile



Clinical geneticist Jim Evans, MD, PhD, wearing his ever present DNA double helix tie, speaks with many people about genetics: training judges how to evaluate genetic evidence; advising Secretary of Health and Human Services Kathleen Sebelius and testifying before Congress about direct-to-consumer genetic tests.

Known for his insight, humor, and humanity, he has been a national spokesperson in the growing area of cancer genetics and testing. Yet he says the most important people with whom he speaks about genetics are patients considering undergoing genetic testing for cancer and medical students whom he teaches about clinical genetics.

Maybe it was warm weather-seeking genes that brought him to Chapel Hill. He remembers, "I had just finished med school at the University of Kansas and was interviewing at a number of schools about internships. In late October, I arrived in Chapel Hill on one of those perfect, warm fall days. I liked the people here and their sense of collaboration. It was clear that they were smart and enjoyed what they did. I decided to come to UNC."

Based at UNC, Evans in a national expert on genetics. He is editor-in-chief of *Genetics in Medicine*, the official journal of the American College of Medical Genetics. He recently completed service as advisor to Sebelius on "Genetics, Health and Society" and serves as the chief science advisor and board member of the Advanced Science and Technology Adjudication Resource, a Congressionally mandated program to extend scientific education to the US judiciary.

Ask him about direct-to-consumer genetic testing and he cites the challenge consumers face trying to "navigate through exaggerated and often incorrect claims made about a product, a great disservice to the public." His advice? "People should take the claims with a huge grain of salt." Evans testified abut this issue before Congress.

And patients considering genetic testing for diseases such as cancer "are grappling with what can be disturbing but useful information. A big challenge there is communicating these results to others for whom these results matter- a sibling, parent, child or other relative."

Evans has been asked on multiple occasions to deliver a "pearls" lecture to UNC medical students, when selected physicians share their pearls of wisdom. Evans explains, "We get extra credit as physicians, just for being a decent human being, a rather sad commentary on our profession. Sometimes all that means is that we return phone calls or emails. I tell the students to treat people the way you would want to be treated. Help patients navigate our medical system. By treating people right, you enrich your own life as well."

For years, Jim and his senior genetics counselor, Cecile Skyrznia, MS, saw an increasing number of patients in Chapel Hill by themselves. Their success has led to the growth of their team at both the faculty and counselor level. And now, Evans and his colleagues have begun a limited telemedicine service Evans sees patients not just in Chapel Hill. He and his colleagues have begun a limited telemedicine service using the University Cancer Research Fund-supported cancer telemedicine network so that patients can have a face-to-face consultation with a clinical geneticist. "Much of what we do in genetics doesn't require a physical exam. We know it's hard for patients to travel sometimes."

Thus far, the visits have taken place with patients in Wilmington. "We saw a handful of patients in 2010, and we plan to expand the program to other areas."

During the second week of his internship, he met his future wife, Marion, an ICU nurse. They have been married for 25 years and have two children. Their son, Joe, is a first-year law school student at UNC, and their daughter, Margaret, is a student at UNC-Greensboro.

Nurse Magnet

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have across oncology to ensure we are giving the very best care for our cancer patients."

At UNC the evaluation process was led by "magnet champions" within each unit. According to James Ludemann, RN, BSN, an inpatient nurse at the N.C. Cancer Hospital, this meant two things, "First, we were in charge of communicating with our unit's staff and preparing them for the Magnet surveyors' site visit. Second, we acted as representatives to the magnet operations committee, sharing 'magnet stories' from our unit, narratives of great nursing in practice and how we reflect the values of a magnet certified hospital." The magnet champions also led the compilation of 'brag books' – collages of photos and stories that illustrate each unit's commitment to nursing excellence.

Sheldra Holloway, RN, displays one of the "brag books" that highlight staff education, quality improvement, and key initiatives of UNC's top-notch nursing staff.

"Magnet status is a respected designation. When nurses look for jobs, they look for Magnet status," says oncology inpatient nurse Amy Weinberg, RN,BSN, OCN. "It means nurses will be well-supported, encouraged to advance in their practice, and be active participants with an effective voice in matters affecting their practice and their patient care."

The Magnet Commissioners picked out several examples of excellence, including the leadership of Mary Tonges, PhD, UNC Hospitals' senior vice president and chief nursing officer, the contributions of the Nursing Professional Development, Education and Research department and the strength of nurse-physician collaborative relationships.

Tracey Martinez, RN, who works in the cancer hospital's outpatient clinics, echoes these points, "We are encouraged to pursue higher levels of education and certification. We are very involved with the plans for patient care. I participate on committees and assist with teaching. I describe us as team players who all strive for the same thing: patient and family satisfaction."

With only six percent of health care facilities nationwide achieving Magnet status, patients at the N.C. Cancer Hospital and all UNC Hospitals can feel good about the level of care they are receiving.

As Andrew Culwell, RN, of the Cancer Hospital's Bone Marrow Transplant unit notes, "The face of any hospital is its nursing staff. Magnet status helps patients know that they will have knowledgeable, satisfied nursing staff who value superb patient care."

Ludemann agrees, "Every patient wants to know they are not only in capable hands when they come to a hospital, but they want to be taken care of by someone who loves and appreciates their job. I believe everyone on our unit loves to care for someone going through one of the hardest times of their life, when they are hit with a diagnosis of cancer. From that basic compassion and humility comes a desire to know and learn more about the ever-changing field of oncology and how we can become better cancer nurses."

Weinberg adds, "We pride ourselves on being knowledgeable about oncology, chemotherapy and side effects. At the same time, we are such a caring, fun-loving group. We love our patients, families and co-workers and try to let that show every day."

A common theme among the N.C. Cancer Hospital's nursing staff was that the process of applying for magnet status has instilled a sense of pride. "I am a member of a great and accomplished team," says Nurse Manager Sue Haney, BSN, RN, MA, CPHQ. "This team values the spirit of the patient and strives to always provide the best possible care experience for them."

"I get passionate when I talk about my job because it truly is a great place to work," says Ludemann.

Martinez sums up the sentiments of her colleagues, "At the end of the day, we can all look at each other and say 'Job well done'."

research briefs

More data on racial disparities in breast cancer

The team whose pioneering finding proved that breast cancer in younger African American women is more likely to be the more aggressive basal-like (or triple-negative) subtype has published a new study in the journal *Clinical Cancer Research* based on the Carolina Breast Cancer Study (CBCS) and funded, in part, by the University Cancer Research Fund.

"Our data show that basal-like breast cancer is an equally aggressive disease in African American women and white women. In addition, African American women had worse outcomes no matter what kind of breast cancer they developed, suggesting that other factors such as disparities in access to care and treatment, for example, for the more common subtypes of breast cancer like luminal A breast cancer, also contribute to the higher breast cancer mortality observed in African American women," said study co-author Charles M. Perou, PhD, professor of Genetics and Pathology.

"Based on these data, I am not sure we can identify a truly good prognosis subtype in African-American women, and we need to find out why" said study co-author Lisa Carey, MD. "These are treatable cancers, and whether women are getting the right drugs or getting the right care, or if there are other fundamental differences in the cancers themselves we should know about is why we have studies like the CBCS ongoing."

"This study underlines the importance of our previous recommendation that African American women, and all breast cancer patients, need the best possible diagnostic workups – including tumor typing, and access to the latest clinical trials," said Robert Millikan, DVM, MPH, PhD, principal investigator of the CBCS and epidemiologist at UNC Lineberger and the Gillings School of Global Public Health.

Discovery holds promise for better cancer vaccines

The promise of vaccines targeted against various types of cancer has raised the hopes of patients and their families. The reality, however, is that these promising treatments are difficult to develop. One of the challenges is identifying a discrete cellular target to stop cancer growth without inactivating the immune system. A team of scientists led by UNC Lineberger's Jon Serody, MD, and Jenny Ting, PhD, found that the absence of the function of a protein called NLRP3 can result in a four-fold increase in a tumor's response to a therapeutic cancer vaccine. If this finding proves consistent, it may be a key to making cancer vaccines a realistic treatment option. Their findings were published in the December 15, 2010 issue of the journal *Cancer Research*.

At present, there is only one FDA-approved cancer vaccine, which costs about $100,000 for three treatments. Serody explains that this is because vaccines are difficult to make. Because a vaccine is person-specific, made with the individual's immune cells, the production process requires that the individual's cells are isolated and shipped to the company for vaccine production. He adds, "Our hope is that our findings and future work in this area will enable us to develop more cost-effective vaccines against many types of cancer."

Partnership addresses cancer health disparities, research capacity

The National Cancer Institute (NCI) has awarded one of two Comprehensive Minority Institution Cancer Center Partnership Grants in the nation to North Carolina Central University (NCCU) and UNC-Chapel Hill/UNC Lineberger Comprehensive Cancer Center. Harvard University and University of Massachusetts – Boston were also awardees. The grant, led by Ricardo Richardson, Ph.D., director of the Cancer Program at the Julius L. Chambers BBRI at NCCU, and UNC Lineberger Director Shelley Earp, MD, will bring more than $7 million over five years to NCCU's Julius L. Chambers Biomedical/Biotechnology Research Institute (BBRI). UNC Lineberger will receive almost $4.9 million.

"This award is a monumental achievement for NCCU because it acknowledges our commitment to address cancer health disparities," Richardson said. "The level of support that we have received from UNC Lineberger through this partnership over the past six years has been extraordinary. The funding will allow us to expand research collaborations among the two institutions, train students and junior faculty in multidisciplinary research aimed at reducing cancer disparities, and consolidates programs of community outreach and education."

"Our partnership has grown over the past six years to encompass investigators across the cancer research spectrum from cancer prevention in the community to molecularly-targeted drug discovery," Earp said. "The faculty, departments, BRITE and BBRI at NCCU are terrific, and the enlargement of our partnership will provide additional opportunities for NCCU to become the nation's best-funded, most research-effective historically black university in the United States."

"We look forward to further integrating NCCU faculty into UNC Lineberger Comprehensive Cancer Center programs and learning from them as to how we can improve our effort to understand and reduce the burden of cancer in minority populations," he added.

Key projects funded by the partnership grant are co-directed by UNC Lineberger members and faculty from NCCU. They include:

- An evaluation of a self-screening cervical cancer test by mail among rural women in North Carolina, led by Jennifer Smith, PhD, Research Associate Professor of Epidemiology in the Gillings School of Global Public Health and led by Walter Charles, PhD, associate professor of psychology at NCCU.
- A comparative study of a precancerous condition called Barrett's esophagus to pinpoint differences in genetic and environmental factors that may contribute to the predominance of this disease in Caucasian Americans and may be protective in African-American patients, led by Nicholas Shaheen, MD, MPH, professor of medicine and epidemiology at UNC-CH and Xiaoxen Chen, PhD, associate professor in the Cancer Research Program at NCCU.
- A study of receptors for key agents that could be administered without undesirable side effects and inhibit the growth of prostate cancer, a disease that disproportionally affects African-American men, led by Keith Burridge, PhD, Distinguished Professor of Cell and Developmental Biology at UNC-CH and Somnath Mukhopadhyay, PhD, assistant professor of chemistry at NCCU.
- A project to identify potential drugs that target a key biomolecular signal involved in triple negative breast cancer, a type of cancer that affects young African-American women disproportionately, led by Gary Johnson, PhD, professor and chair of Pharmacology at UNC-CH and John Scott, PhD, associate professor of Pharmaceutical Sciences at NCCU.

Ricardo Richardson, PhD, of NCCU confers with MS student Naima Stennett. One of the partnership grant's goals is to enhance training for graduate students interested in cancer research.

- An intervention, centered at barbershops, aimed at promoting physical activity in African-American men, led by Laura Linnan, ScD, CHES, associate professor in the Department of Health Behavior and Health Education in the Gillings School of Global Public Health with David Jolly, DrPH, MPH, associate professor and chair of the Department of Health Education at NCCU.

Piano Dedication

Lineberger Board of Visitors members Steve and Jan Capps of Wilmington were joined by Chancellor Holden Thorp and Interim Chief Diversity Officer Terri Houston who performed for the official dedication of the Yamaha Baby Grand piano given by the Capps to the N. C. Cancer Hospital. The piano is a wonderful addition to the second floor clinic waiting area where patients and their families can enjoy it.

Outstanding Youth in Philanthropy

Cycle 2010, a group of Boy Scouts and students from Chapel Hill who bicycled across the country this past summer to raise money for UNC Lineberger, recipients of the Outstanding Youth in Philanthropy Award. The award was presented by the N.C. Triangle Chapter of the Association of Fundraising Professionals at a ceremony held at Prestonwood Country Club in Cary. The group's summer of cycling raised close to $25,000 for UNC Lineberger. To learn more about Cycle 20Ten, visit unclineberger.org/events/cycle20ten.

Isner Charity Challenge

Tennis superstar John Isner and doubles partner Sam Querrey hosted the First Inaguaral Charity Challenge on December 6 in Manhatten Beach, CA to benefit Lineberger. John's mother, Karen Isner was a cancer patient treated by Drs. Richard Goldberg and Benjamin Calvo who are pictured at the event with the players and Bob and Karen Isner.

Don't miss the boat!

Many communities have organized Dragon boat races, a contest involving 41-foot boats holding 20 as paddlers, a steer person and a drummer as fundraisers for cancer awareness. Dragon boating is teamwork at its finest, challenging, and calls to all ages, genders and athletic skills. If you would be interested in learning more and helping to organize a UNC dragon boat race fundraiser to benefit "Get Real & Heel", UNC's exercise program for breast cancer survivors, please contact Loretta Muss, coordinator of the N.C. Cancer Hospital Patient and Family Advisory Board, at 919-445-5336 or loretta_muss@med.unc.edu.

In memoriam

Bernice McElrath of Robersonville, NC, a longtime lay health advisor and outreach specialist for the North Carolina Breast Cancer Screening Program (NCBCSP), died on November 29, 2010. After a long successful teaching career, Bernice dedicated her life to helping women get screened for breast cancer and cope with a diagnosis of breast cancer. In 1997, McElrath spoke with then-NCI director Dr. Rick Klausner and other University dignitaries at the dedication of the 41,000 square feet addition to the Lineberger building.

Drs. JoAnne (NCBCSP Director) and Shelley Earp, said, "We mourn the death of Bernice McElrath, an amazing women we came to know and admire and love. We remember Bernice for her zest for life, her prowess as a public speaker, her drive to make the world a better place, her compassion for others and the warmth of her friendship. Her example has helped guide the mission of the UNC Lineberger Comprehensive Cancer Center and continues to inspire her friends and former colleagues."

WACHOVIA Tar Heel 10 MILER & FLEET FEET Sports 4-mile run presented by Endurance

UNC Lineberger is excited to be the beneficiary of the 2011 Wachovia Tar Heel 10-miler, which will be held April 9, 2011. The event is expected to sell out – come out and run 10-miles, the Fleet Feet 4-miler, volunteer for the race or cheer on the participants as they run through some of the most scenic routes in Chapel Hill. For more information see www.tarheel10miler.com.

For the Brays, volunteering is a family affair

Volunteering for UNC Lineberger is a family event for Christy Bray, and her parents, Joe and Dina. For the past several years, they have volunteered at Fast Break with Roy Williams, Tickled Pink, and the Beach Ball. This year, Christy chaired the 2010 Beach Ball: The White Party.

Christy considers the group of volunteers with whom she works as extended family members. "We're there for each other," she says. "We spend so much time together, I feel like we're sisters."

It all began when Christy, a native of Chapel Hill and a recent UNC graduate, was asked by Susan Reda, whom she knew from the Siena Hotel, to volunteer for the 2006 Tickled Pink event at Galloway Ridge. She liked it and next volunteered at the 2007 Beach Ball. Christy, a member of the Junior League of Durham and Orange Counties, recruited fellow members to help at the Beach Ball. She also asked her mother.

Joe, Dina and Christy Bray at Beach Ball 2010.

Dina Bray helped at the registration desk, checking people in to the event. "Not overwhelming and a good way to start as a volunteer," she says. Dina has continued to volunteer at many UNC Lineberger events.

She and her husband Joe are also longtime and dedicated volunteers at University Baptist Church in Chapel Hill. Between them they have served as deacons, worked with the Sunday school, and the kitchen and reception committees.

Joe Bray, a native of Siler City and UNC graduate, shares his professional photography skills at events, capturing important moments and making memories for attendees. Wife Dina says, "He's a social person and he loves to take pictures, so he really enjoys this volunteer work."

Christy explains that "walking through the new cancer hospital is so rewarding because I know that I have helped to raise funds so that the staff can help more patients and families."

Dina Bray concurs, "It's a way to give back to the community. I love it, and I feel fulfilled."

Although none of the Brays have had cancer, they have had family members die of the disease. Christy says, "I have friends who have had cancer, and volunteering for UNC Lineberger is my way of honoring their experience."

Mary Seagroves, UNC Lineberger special events coordinator, says, "The Brays have been a wonderful family to work with. While their family hasn't been touched directly, they understand the importance of the cause and have dedicated themselves in a way to help support the patients and families who have. Lineberger is fortunate to have the involvement of such a giving and caring family."

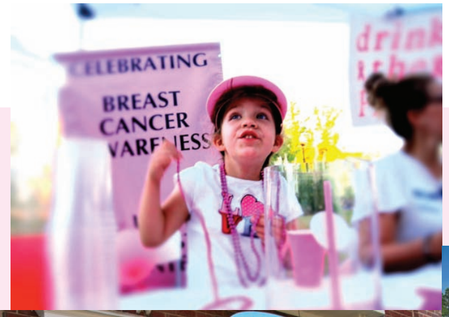
Christy has been a party planner and event organizer before she volunteered at UNC Lineberger as well as her Junior League work. "It's what I do," she explained. "The change of venue for The White Party gave us a chance to make some changes in the event." She and other committee members have already begun preparations for the 2011 White Party.

Although Christy is their daughter, when it comes to UNC Lineberger volunteer work, "we're a team, and she's the boss," Dina says. "It's the one time I defer to her."

Christy says, "It's so cool for our family to be able to support each other as volunteers. We get to see the results of the work we talk about at home before an event. It's wonderful to have Lineberger in my life."

Tailgates, tykes and t-shirts helped Turn the Town Pink

More than 60 community partners participated in Turn the Town Pink, a month-long community campaign held last October, raising over $40,000 to benefit the Comprehensive Cancer Support Program at the N.C. Cancer Hospital.



Six year old Maddie Moore, daughter of Darcy and Drew Moore of Chapel Hill raised more than $1,400 for UNC Lineberger during October's Turn the Town Pink celebration with her lemonade and cupcake stands and her very own web site.

Barbara Richardson and her friends took a lighthearted approach to October's "Turn Your Tailgate Pink" contest, held during the UNC vs. William and Mary football pregame festivities. Their creativity won Barbara a tailgate party for 100, donated by Chapel Hill Restaurant Group.

Franklin Street landmark Johnny T-shirt joined merchants across Chapel Hill and Carrboro, selling Turn the Town Pink window decals to benefit UNC Lineberger's patient and family support programs.

calendar of events

february

19th Lineberger Club Luncheon
George Watts Hill Alumni Center
1-4 p.m.

20th UNC Blue & Pink Gymnastics Meet and
Breast Cancer Awareness Fair
Carmichael Arena, UNC-Chapel Hill
Fair: 12:30 p.m.; Gymnastics Meet: 2:00 p.m.

23rd Melanoma Patient Day (Free Symposium)
Friday Center, Chapel Hill
12:30-4:30 p.m.

april

9th Wachovia Tar Heel 10 Miler
UNC-Chapel Hill campus
7:30 a.m.

16th Beach Ball 2011: The White Party
Chapel Hill Country Club
6:00 p.m.

may

13th & 14th Coping With Cancer symposium
Hilton Garden Inn
Kitty Hawk, North Carolina

To purchase tickets or for more information about these events and other UNC Lineberger news, visit www.unclineberger.org, or follow us on

facebook twitter

UNC LINEBERGER

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Roy Williams' Fast Break Against Cancer

Coach Williams and Brad Daugherty pose with retired Tarheel Coach Bill Guthridge at Coach Williams' *Fast Break Against Cancer* held in October. Over 300 people attended this year's event, which raised more than $125,000. Since the event began in 2005 it has raised more than $1.1 million!

the WHITE party
BEACH BALL 2011
{MILLION DOLLAR YEAR}

Saturday, April 16, 2011
Chapel Hill Country Club

The White Party, also known as the Beach Ball, is an annual fundraiser benefitting UNC Lineberger. This year's gala promises to be bigger and better than ever! In its seven year history, the Beach Ball has raised over $880,000, so we are poised to hit the million dollar mark this year. We hope you'll join us for the excitement!

Visit unclineberger.org/gift/events.asp for more info

Mark Jacobson, whose Mark Jacobson Toyota was the presenting sponsor for Rebounds & Rhinestones, celebrated with friends and colleagues a the event.

Rebounds & Rhinestones

Robin Roberts, host of ABC's *Good Morning America*, poses with UNC Women's Basketball player Jessica Breland and UNC Women's Basketball Coach Sylvia Hatchell on November 5th at the *Rebounds & Rhinestones* kickoff event for the Jessica Breland Comeback Kids Fund. The event raised more than $60,000 for the pediatric oncology program as part of a yearlong fundraiser. For more information on how to support the Breland fund, go to unclineberger.org/comeback.