

# Cancer

The Cancer Program of UNC-Chapel Hill & UNC Health Care

Spring 2006

## Developing New Ways of Treating Metastatic Brain Tumors

Brain tumors, especially metastatic ones, are increasingly common. In fact, there are between 125,000 and 175,000 new brain metastasis patients each year in the United States. The most common cancers linked to these tumors are lung, breast and melanoma.

"Our work and many others' has shown that as treatment of cancer has improved the incidence of metastasis has increased," explains Matt Ewend, chief of neurosurgery and co-director of Lineberger's Neuro-Oncology Program. "Many treatments, particularly new targeted treatments, don't get into the brain well, so it acts as a sanctuary for tumor cells. Alternatively, patients who may not have lived long enough to develop brain tumors in the past may now be living longer and the brain disease is becoming more evident."

That's why this multidisciplinary team of researchers and clinicians is working to provide better diagnosis and treatment of metastatic tumors. "This draws on the strengths of our cancer center and focuses our attention on the large group of patients with brain metastases," Ewend notes.

Adds David Morris, assistant professor and co-director of the Program, "Unlike many places, UNC has tried to individualize care to the patient. If you have lung cancer with brain metastases, you should not necessarily be treated in the same manner as a breast cancer patient with brain metastases."

The program is doing groundbreaking work in two areas: radiation therapy and chemotherapy.

### Radiation Oncology

"The key to radiation treatment is targeting the tumor in

*continued on page 5*



*The Neuro-Oncology Team*  
 Seated (left to right): Patricia Cadle, oncology chaplain; Sharon Cush, nurse clinician; Dr. Lester Kwock, radiology. Standing (left to right): Dr. Julie Sharpless, pituitary tumor specialist; Dr. David Morris, program co-director; Dr. Fran Collichio, medical oncology; Dr. Samer Elbabaa, neurosurgery resident; Dr. Matt Ewend, program co-director; Dr. J. Keith Smith, neuroradiology. Not pictured is Dr. Elizabeth Bullitt, professor of neurosurgery.

## Hammonds Make Generous Gift for Pediatric Oncology

When the internationally revered childhood cancer expert, Dr. Denny Hammond, and his wife Polly, decided to make a \$1.3 million planned gift, they chose the place where his career began: UNC-Chapel Hill. In the 1940s when Hammond graduated from undergraduate school and attended the medical school, the UNC Lineberger Comprehensive Cancer Center was only a dream. But now, with the tremendous boost of the generous couple's planned gift, the nationally prominent cancer center and its pediatric oncology program can make larger strides in research to understand better these cancers that affect the smallest and most vulnerable of our population.

As H. Shelton Earp, Director of UNC Lineberger Comprehensive Cancer Center said, "Denny and Polly are committed to our vision to have UNC Lineberger become a national leader, seeking to cure and prevent childhood cancer. Denny knows from firsthand experience that we have made great progress, but there are still critical issues in pediatric-age cancers. Even in

childhood leukemias where cure rates are high, too many patients are not cured. Forward looking research is the answer and the Hammonds' generous planned gift will help make this happen."



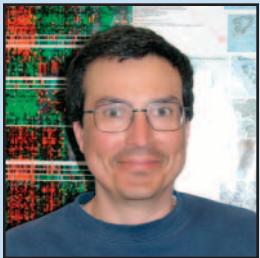
*Dr. Denny Hammond; Dr. Julie Blatt, chief, UNC Pediatric Hematology/Oncology; Dr. Shelley Earp, UNC Lineberger director.*

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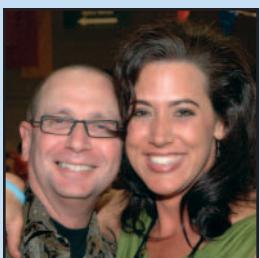
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4 *Profile: Chuck Perou*



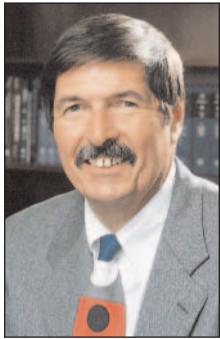
6 *Book Mark My Word*



7 *3rd Annual Beach Ball*

*the inside line up*

# Director's Message



Dr. H. Shelton Earp, III

This issue of *CancerLines* includes articles about difficult aspects of the brain: how to treat brain cancer and how to change someone's mind about something.

Tumors of the brain are hard to treat, but Neuro-Oncology Program leader Dr. Matt Ewend is developing innovative therapy to combat these cancers. His research with colleague Dr. Elizabeth Bullitt is especially exciting. Their colorful MRI images show changes to brain blood vessels that may tell us a treatment is working sooner than looking for the tumor to shrink.

Changing someone's mind is another difficult task for the brain. Dr. Marci Campbell is tackling this problem successfully with *Body & Soul*, the National Cancer Institute program to increase consumption of

fruits and vegetables by African-American congregations. This program started as a collaboration between UNC and Emory University.

One of our brightest minds is that of Dr. Chuck Perou, who is profiled in this issue. Chuck was one of the most highly recruited postdoctoral fellows in the country several years ago and he chose to come to UNC. Chuck is working on identifying specific types of breast cancer using a technique in which you can survey the expression of over 20,000 genes at one time. It uses glass slides with infinitesimally small dots of DNA on them and in shorthand are called microarrays - the microscopic dots are arrayed on the slides. The genetic patterns that come from this technique are revolutionizing the diagnosis of breast and other cancer subtypes. These patterns will help us tailor treatment for specific types of breast cancer.

Chuck was my partner, along with more than 15 other breast cancer researchers, in submitting a renewal application for UNC's Specialized

Program of Research Excellence (SPORE) in breast cancer. SPOREs are an important funding mechanism from the National Cancer Institute that stimulate cross-disciplinary research, the kind that increases the likelihood of translating bench science to the clinic. This latest SPORE application focuses on the different types of breast cancer that Chuck and his colleagues have identified, particularly those with the worst prognosis: basal-like tumors, luminal B tumors, and tumors that over-express HER2. UNC's SPORE projects are designed to find potential pathways and targets for therapeutic innovation.

When great minds come with great hearts, it is wonderful news for all of us. In this issue, you'll read about the generous gift from Denny and Polly Hammond and the impact it will have on pediatric cancer care and research at UNC. UNC Lineberger Board of Visitors member Mary Seagroves and Jeannee Hoffman organized the third annual Lineberger Beach Ball with a large committee of enthusiastic volunteers. This event is a wonderful evening of friend raising and fund raising for the Cancer Center and my thanks goes out to all who were involved. ●

## Hammond gift

*continued from page 1*

Dr. Julie Blatt, chief of pediatric hematology/oncology division at UNC commented that "Dr. Hammond has long been a role model for many of us in pediatric hematology/oncology and understands what it takes to develop a top pediatric oncology program and provide the most advanced treatment and research for childhood cancer. The Hammond gift will help us fulfill this mission of bench-to-bedside research which we think is the best way to help our young patients."

Dr. Hammond's distinguished career in medicine was recognized by UNC in 1994, when he received the UNC School of Medicine Distinguished Service Award for his professional, service and leadership accomplishments. Dr. Hammond was the founding director of the University of Southern California Comprehensive Cancer Center for its first ten years. He was responsible for the creation of its scientific programs, the development of faculty and staff and the design and funding of the USC-Norris Cancer Hospital and Research Institute. The USC Cancer Center was one of the first comprehensive cancer centers designated by the National Cancer Institute in 1973.

Hammond is also the past president and CEO of the National Childhood Cancer Foundation (now known as

CureSearch), a charitable foundation dedicated to support research on improved treatments and cures for childhood cancer; the biology and causes of childhood cancer and programs of national public awareness and advocacy to benefit child with cancer.

He was a member and a Principal Investigator of the national Children's Cancer Group (CCG) for 11 years at Children's Hospital Los Angeles, and thereafter served for 24 years as Group Chairman. During his tenure CCG membership was expanded from 25 hospitals collaborating in chemotherapy research on acute leukemia in children to a group of over 2,000 specialists in all relevant medical disciplines at 118 hospitals throughout North America, which cooperated in conducting clinical and laboratory research on all types of childhood cancers. In 2000, the CCG merged with three other childhood cancer research groups to become the Children's Oncology Group (COG). Its 220 member hospitals, located in 48 states and 9 provinces, provide care for up to 90% of children with cancer in the US and Canada. UNC is a member institution.

Author or co-author of over 300 scientific manuscripts and book chapters, Hammond is a member of numerous scientific societies and editorial boards. He served as a national director and officer of the American Cancer Society.

Denny and Polly live in Southern California and enjoy spending time with their children and grandchildren. Denny remains a Professor of Pediatrics at the USC-Keck School of Medicine and serves part-time at the University as Associate Vice President for Health Affairs and to the NCCF as a trustee. ●

## Staff Changes in Office of External Affairs

The Office of External Affairs at UNC Lineberger Comprehensive Cancer Center is pleased to announce staff changes.

Leslie Nelson has been promoted to Assistant Director of Development for Major Gifts at UNC Lineberger Comprehensive Cancer Center. Leslie has served as Lineberger's Assistant Director of Development for Annual Giving since August 2005. Prior to that she was with the University of Virginia as Associate Director of the School of Architecture Foundation.

Mary Brooks Rice Seagroves has been selected as Special Events Coordinator at UNC Lineberger. Mary chaired the Beach Ball, the Cancer Center's largest and most successful special event, for the last



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UNC Lineberger is designated a comprehensive cancer center by the National Cancer Institute.

*Cancer Lines* is a publication of the UNC Lineberger Comprehensive Cancer Center, The University of North Carolina School of Medicine at Chapel Hill.

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Debbie Dibbert, Assistant Dean for Institutional Advancement  
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UNC Lineberger  
Comprehensive Cancer Center  
CB# 7295  
School of Medicine  
University of North Carolina  
at Chapel Hill  
Chapel Hill, NC 27599-7295  
(919) 966-5905  
www.unclineberger.org

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Leslie Nelson and Mary Seagroves

three years and also chaired the first Fast Break Breakfast with Coach Roy Williams. She has served on Lineberger's Breast Cancer Advisory Board and its Board of Visitors. Previously, Mary worked at Key Mortgage Company as a licensed mortgage loan officer and for Wachovia Bank for sixteen years. ●

# UNC Program to Improve Diets of African-Americans Adapted for National Use

A graduate school interest in health communications and nutrition led Dr. Marci Campbell, associate professor of nutrition and leader of the UNC Lineberger Cancer Prevention and Control program, to develop health promotion programs focusing on diet and exercise and geared toward members of African-American churches.

Dr. Campbell recognizes that "the church is a tremendously important institution in the African-American community. Traditionally churches have provided not only spiritual and social support, but also tangible help and assistance to members. It is a stable institution in the community and typically members have attended the same church for many years."

"What we have learned over the years is that many churches emphasize the connection between body, mind, and spirit (the body as a temple) and that this encourages pastors and members to include health promotion as a part of the church mission. Thus, we have been fortunate to be welcomed into the churches to partner with them for health improvement of their membership."

"Body & Soul: A Celebration of Healthy Eating and Living" is a wellness program that empowers church members to eat five or more servings of fruits and vegetables every day for better health. Through the implementation of this program, churches help their members take care of their bodies as well as their spirits. Body & Soul is being offered and promoted by the National Cancer Institute (NCI).

The Body & Soul program is an outgrowth of two previous successful intervention projects: "Black Churches United for Better Health" in North Carolina, and "Eat for Life" in Georgia, a collaboration between Dr. Campbell and Dr. Ken Resnicow, then at Emory University and now at the University of Michigan.

The two earlier programs took different approaches. The North Carolina project, Black Churches United for Better Health, was a collaboration between UNC, the State health department, Duke, and N. C. State. It focused on increasing the availability of fruits and vegetables at church functions, involving lay health advisors, organizing educational sessions, increasing pastor involvement, and sending individually tailored newsletters to church members. Fifty rural black churches participated, and the resulting increase in fruit and vegetable consumption was encouraging: an average of one daily serving. The "Eat for Life" project focused more exclusively at the individual level, employing self-help tools and motivational interviewing via telephone calls from dietitians, and also demonstrated increased fruit and vegetable consumption among participants.

A pilot study funded by the American Cancer Society and NCI in fifteen churches in various regions of the country combined the most efficacious and cost-effective interventions from these two studies, and the success of this pilot led to a decision by NCI to disseminate Body & Soul nationally in an effort to increase the number of successful programs, address racial disparities, and promote faith-based initiatives.



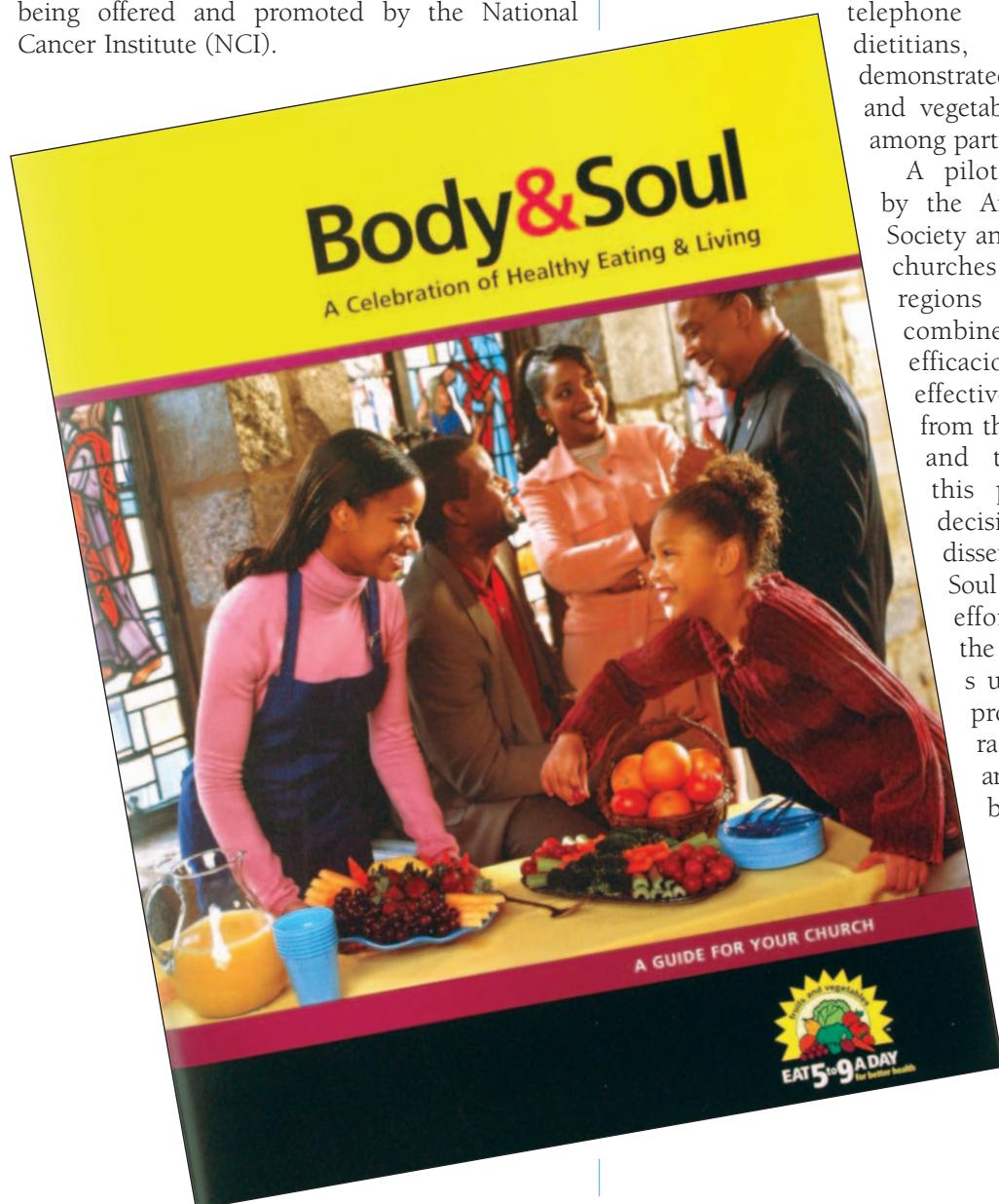
Nancy Tice, member of Oak Level United Church of Christ and Wellness for African-Americans through Churches (WATCH) project church coordinator, with Dr. Marci Campbell.

This dissemination began in September of 2005 with promotional spots on local radio stations with a primarily African-American audience in major cities throughout the country. The program consists of four pillars: a pastor who is committed and involved, church activities that promote healthy eating, a church environment that promotes healthy eating, and peer counseling that motivates church members to eat a healthy diet. A guide for churches provided free by NCI describes the first three pillars in detail and a free DVD and training manuals provide the information needed for training church members to be peer counselors. This training, developed by UNC, is based in the communication skills used in motivational interviewing and is unique in that it provides lay training in these skills and was developed specifically for African-American churches.

Dr. Campbell and Dr. Resnicow have just completed an evaluation for NCI of the use of the DVD-based training program. Reaction to the DVD was overwhelmingly positive. Respondents noted that the DVD taught important new communication skills and had the potential to be a valuable resource for their church members. Dr. Campbell is currently evaluating the impact of the Body & Soul program in increasing fruit and vegetable intake among church members in 16 churches across the country through a grant from the Centers for Disease Control.

"Body & Soul is a great example of taking intervention research and translating it into wide community distribution," said Alexis Williams, specialist for faith-based initiatives working with the NCI. "We've had tremendous response to the program from churches and community-based organizations and consider it a great success."

Program materials can be obtained by calling 1-800-422-6237. The Body & Soul Peer Counselor training DVD must be specifically requested in addition to the church guide. More information on Body & Soul is available on the NCI website: <http://5aday.gov/aahealth/bodyandsoul/index.html>.



# Profile

protein, HER-1, in this patient subset is a better therapy for them."

## Bench Work

Perou was raised in Sterling, Illinois by a pathologist father and a nurse/homemaker mother. "I didn't want to go to med school," he recalls. But after graduating from Bates College in Lewiston, Maine, he became a lab tech. "I learned that I loved bench work and science," he says.

Not wasting any time, he went right from a tech to grad student at the University of Utah, where he earned his PhD. In graduate school, he cloned a human disease gene as part of his thesis research. "The disease was a rare one called Chediak-Higashi Syndrome, but the identification of a human disease gene is always an important thing," he notes.

Perou did his postdoctoral work at Stanford University, where he became interested in genetics and cancer. "I had a great opportunity to work for one of the developers of the genetic technology we use today," he says. DNA microarrays allow researchers to study thousands of genes at once. Before this technology was developed, scientists could only look at one at a time.

"I went to Stanford because the technology was there and I had an opportunity to work under two of the smartest scientists in the world," he continues. "I was one of the first to use this tool to study human tumors." He finished there in 2001.

professor of pharmacology, and Dr. Young E. Whang, assistant professor of medicine. Dr. James L. Mohler, chairman of the department of urologic oncology at Roswell Park Cancer Institute in Buffalo,

NY, and a UNC Lineberger member, also collaborated on the study.

## Cancer support cells may evolve, fuel tumor growth

Cancers may cause surrounding supportive cells to evolve and ultimately promote cancer growth, according to new research from UNC Lineberger member Dr. Terry Van Dyke, professor of genetics and biochemistry and biophysics in the School of Medicine. This is believed to be the first evidence that mutations within cancer cells can signal surrounding tissue cells to alter their molecular composition in ways that promote tumor growth and proliferation.

The findings also suggest that cell mutations that promote cancer progression may arise in cells other than the predominant cancer cell. The NCI-funded study also indicates that new anti-tumor therapies may be more effective if their targets are broadened to include molecules within supporting cells of the cancer.

These additional target cells are in the tumor's surrounding "microenvironment," or stroma, including the supporting connective tissue that forms the framework of organs such as the breast, colon and prostate. They also are found in the tumor's blood vessels, or its vasculature.

"If the changes you're targeting in the



Dr. Chuck Perou, Assistant Professor, Cancer Genetics

Chuck Perou is fascinated by how things work. That's why he specialized in genetics.

"Genetics is the underlying cause of all cancer and the way we are, the basis for understanding the biology of human disease," says the assistant professor of genetics and Lineberger member. "And I enjoy finding new biology and figuring out how that information can improve patient care."

## Breast Cancer Focus

His primary focus is on breast cancer genetics and genomics. His research will help develop new diagnostic tests and design new clinical trials to improve patient care.

There are more than 200,000 new breast cancer cases each year in the U.S., making it the second-leading cancer in women behind lung cancer.

Perou's lab is documenting the biological diversity of human tumors to make it easier for physicians to diagnose and treat them more effectively. His lab's genetic studies have already discovered a new type of breast cancer for which therapies are less than optimal.

"We looked closely at data to see if there were any drug-targets, and there are," he explains. "We've started a clinical trial to see if targeting a particular

## Chapel Hill-Bound

Perou likes to joke that he chose to join UNC's faculty because of the University's basketball teams, but there was more to it than that.

"Many high-powered academic institutions are in big cities," he explains. "They're expensive and there's not a high quality of life. Chapel Hill is great."

"This is a great scientific institution," he adds "It's where I wanted to be."

Chuck's wife Amy works at the Bryson Project in Human Genetics at UNC. They have two children: Eric, 11, and Emily, 7. ●

# Briefs

## Cellular molecule may provide target for treatment

A team of UNC scientists has identified a molecule that stimulates the aggressive growth of prostate cancer and could be a target for developing novel drugs. The Ack1 molecules stimulate tumor formation in part by signaling prostate cells to rid themselves of a tumor-suppressor protein that would normally inhibit rapid cell growth.

Dr. Shelton Earp, UNC Lineberger's director, led the study. The research was funded by the National Cancer Institute.

Using geldanamycin, an experimental drug developed by the National Cancer Institute, the UNC Lineberger group found Ack1 activity could be inhibited through interference with its molecular interactions. The drug dramatically decreases Ack1 activity and slows tumor formation.

In addition, the team showed the levels of the activated Ack1 to be much higher in the advanced tumors. "Because we found Ack1 is more active in advanced prostate tumors, and its inhibition blocks experimental tumor growth," Earp says, "we believe Ack1 should be a target for novel drug development."

The article appeared in the 11/15/05 issue of *Cancer Research*. Along with Earp, UNC collaborators include UNC Lineberger members Dr. Nupam P. Mahajan, assistant

predominant cancer cell are going to affect, say, the supportive tissue, it may be best to develop therapies that hit both types of cell," Van Dyke says.

The article appeared as the cover story in the 12/16/05 issue of the journal *Cell*.

## Study sets treatment standard for elderly with colon cancer

One of the newest and most potent chemotherapies for colon cancer is as safe and effective for the elderly as it is for younger patients, notes a UNC-led data review. The study was led by Dr. Richard Goldberg, associate director of clinical research at UNC Lineberger Comprehensive Cancer Center, professor of medicine in UNC's School of Medicine and chief of hematology-oncology at UNC Health Care.

The analysis focused on nearly 4,000 colon cancer patients who had been enrolled in four large-scale clinical trials that began in the 1990s nationwide and in Europe. The four studies helped establish the value against colorectal cancer of the chemotherapy regimen known as FOLFOX4, a combination of the standard anticancer drugs 5-fluorouracil (5-FU), leucovorin and the new drug oxaliplatin.

The study showed that age alone should not exclude an otherwise healthy elderly patient from receiving FOLFOX therapy. This includes people who had just undergone surgery for colon cancer, those with advanced disease who are receiving their first chemotherapy treatments and patients with advanced disease who are getting a second treatment regimen.

"Doctors should be willing to offer their patients who are good candidates for treatment the best chemotherapy available in these situations. We know from this study that

## Brain Tumors

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an attempt to avoid involving normal brain cells or other organs," Morris says. Several new radiation therapies are being tested:

- Treatments that completely avoid or reduce the dose to nearby organs (such as the eyes or portions of the brain). The team is developing a radiation oncology pediatric neuroanatomy atlas that can help plan radiation treatments both off and on protocols. "It may help prevent long-term effects of therapy or at least give us a better ability to predict the effects for our most vulnerable patient population," he says.
- Drugs that may make tumors more sensitive to radiation while not affecting the normal brain or organs. For example, in lung cancer, Morris is examining the use of Pemetrexed - an FDA-approved drug for lung cancer treatment that acts as a radiation sensitizer - and whether the combination of radiation and medication can improve patient outcomes.
- Drugs or other medications that can protect normal organs from radiation. For breast cancer, his team is testing a novel radiation sensitizer, Efavoxirral, with radiation. The drug increases oxygenation in tumors which should make them more sensitive to radiation while not making normal brain cells more sensitive.

FOLFOX is safe and effective in both older and younger patients with colorectal cancer," Goldberg says.

The findings were presented at a January 2006 gastrointestinal cancer symposium convened by the American Society of Clinical Oncology, the American Society of Radiation Oncology, the American Gastroenterological Association and the Society of Surgical Oncology.

### Kaposi herpes virus linked to pre-lymphoma

A research team led by Dirk Dittmer, assistant professor of virology and a UNC Lineberger member, discovered that Kaposi Sarcoma-associated herpes virus, or KSHV, induced a pre-lymphoma condition. The study also found that the virus was linked to true lymphoma in mice. About 25 to 35 percent of all human cancers have a viral origin or require viral infection as an essential cofactor.

This is a significant finding that helps scientists understand the genesis of this particular type of blood cancer. Because only the cancer cells carry the virus, one or more current anti-viral therapy could benefit patients with this particular type of B-cell lymphoma.

The research also shows that a particular viral gene in the KSHV prompted pre-malignant and malignant changes in the cells. This suggests that the gene might be a novel disease marker, and thus a promising target for lymphoma treatments.

The article appeared in the March 2006 issue of *The Journal of Clinical Investigation*. Dittmer's research was funded by the Leukemia & Lymphoma Society. ●

Leslie H. Lang contributed to this report.

"There is hope that it will improve survival and obtain better control of the disease in the brain," he explains.

Many patients receive treatment daily on an outpatient basis, allowing the team to care for and assess patients often over several weeks. This provides significant continuity of care.

### Chemotherapy

"Chemotherapy is the least developed treatment but, paradoxically, it offers the most promise for the future," Ewend says. Two important studies are underway to create better therapies.

Fran Collichio is a clinical associate professor working in medical oncology. Her team is investigating a novel targeted therapy using a class of medicines called tyrosine kinase inhibitors. "It's unclear if or how these medicines get beyond the brain barrier," she explains. "We're measuring the level of drug we find in the cerebral spinal fluid to find out the optimum amount required to treat patients with brain tumors." The study will last about one year.

"These types of studies are essential to improving brain metastases therapy," Ewend explains. "Every tumor cell in the brain has a blood supply. We have to learn which drugs can reach the tumor cells through the blood stream. Testing the drug levels in the brain will help us choose the best treatment for our patients."

Another project is looking for a way to determine malignancy using Magnetic Resonance Imaging (MRI). Currently, it's hard

to do, but Dr. Elizabeth Bullitt, professor of neurosurgery, has pioneered a way of looking at brain tumor blood vessels that might make it easier.

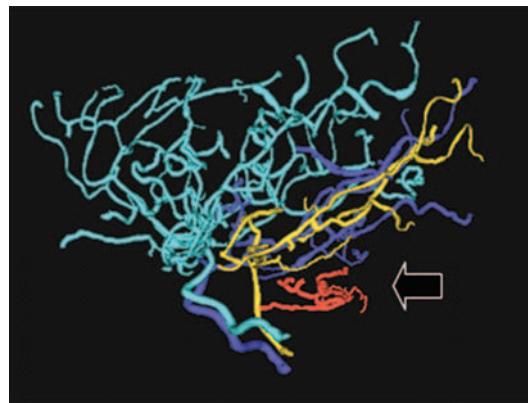
The most malignant tumors have more tortuous or "wiggly" vessels, which appear to be the first to respond to therapy. "Using MRIs, we can quantitatively compare the shapes of the vessels to those of a set of healthy subjects to derive a number called a Malignancy Probability," she notes. "A high MP is bad and indicates active cancer. A low MP is good and indicates a benign tumor or inactive disease."

Right now there is no good way of monitoring treatment response effectively and non-invasively, Ewend notes. "This method could make it easier and faster to determine if a particular treatment is working."

### End Result

By taking a multidisciplinary approach to the diagnosis and treatment of metastatic brain tumors, the UNC Neuro-Oncology program is doing valuable research that directly affects patient outcomes.

Sharon Cush, an oncology nurse and the program's nurse coordinator, explains. "Like all the multidisciplinary cancer programs at UNC, patients benefit from evaluation, treatment planning and continuum of care from diagnosis to end of life care," she says. "We focus on the entire picture instead of a single aspect of the patient's care." ●



Small vessels (shown in red) segmented from MRI images appear abnormally "wiggly" in the region of malignant tumors.

### Patient Profile: Kathy Wood

Rubbing her pectoral muscles after a strenuous hike, Kathy Wood found a lump. It was the first indication she had of a fast-growing breast cancer.

Wood chose UNC because of its reputation as a great women's hospital, but she was most impressed with the team approach. "I know from the business world that teams make better decisions, so I really liked the fact that they had all doctors and nurses looking at my pathology."

That was important to her. "I felt like I was getting a treatment plan that was just for me, not every other patient who walks through the door."

Unfortunately, Wood's cancer metastized and she returned to UNC for treatment in the Neuro-Oncology Program.



Wood with son Jarrett and husband Brian.

Again, she benefited from the team approach.

"I really appreciate that they work together with each other and with me to fight this cancer as hard as we can," Wood says. "I'm one of the patients who comes in with a notebook of questions," she says.

"And Dr. [Matt] Ewend and his team go through them with me one by one patiently. They listen. They laugh if I make a joke. They give me time - and I need that. I want to know what's going on in my head. I've never felt rushed."

That, coupled with the team's cross-functional approach and depth of knowledge, is why she came back to UNC for her brain cancer treatments. "You can't get better care than what you get at UNC," she said.. ●

# "Bookmark My Word: We're going to beat cancer"

Strong words for 9-year old Jennifer Hodshon and her 5-year old brother Michael. But five years and over 10,000 bookmarks later, they have raised close to \$15,000 for cancer research, first at Memorial Sloan-Kettering and now at UNC Lineberger.



Sample bookmarks

and now at UNC Lineberger.

Their business began in the summer of 2001 when Jennifer and Michael asked their parents if they could start a business. "They thought it was a great idea," Jennifer recalls. "They asked us, 'what will you sell?' And 'who will you give the money to?'"

Jennifer and Michael decided on bookmarks because both were avid readers and the bookmarks were easy to make and provided a way to involve lots of kids "from ages 1 to 100," Michael said with a smile, "because everyone can color them." Bookmark colorers and designers range from church and synagogue members to school classes and community groups.

Jennifer explains, "When we were walking around Memorial Sloan-Kettering, I began to understand what my mom meant by 'You have only wants, not needs.' I saw sick kids my age lying in bed. I knew that we had to help."

Their family moved to Cary last summer, and the young people decided to give their proceeds to a North Carolina cancer center and selected UNC Lineberger.

Jennifer, now 14 and an 8th grader at Salem Middle School and Michael, now 10 and a 4th grader at Highcroft Elementary School, have a website (<http://www.geocities.com/bookmarkmyword/main.html>) and plan to participate in many events at which they will sell their bookmarks.

Jennifer and Michael, along with their parents Debbie and Jay met with the UNC Lineberger Board of Visitors at the April 21 meeting and presented a check for \$1500. ●



Board member Mary Arney looks over the selection of bookmarks as Jennifer and Michael Hodshon assist.

## UNC Lineberger Holds 30th Annual Scientific Symposium

More than 500 scientists gathered at the Friday Center April 24-25 to hear and learn more about "Models of Human Cancer: At the Edge of Discovery." The program highlighted leading research and featured world-class speakers who presented recent progress and discussed the challenges and promise of cancer research.

Begun by Dr. Joseph Pagano, director emeritus, this is now the major annual research symposium of the Research Triangle Park area and the largest annual event in the UNC School of Medicine.

With strong sustained support from UNC School of Medicine departments and sponsors, the meeting is offered at no charge, an important feature for graduate and medical students. Previous symposia have featured Nobel Laureates including James Watson, Stanley Cohen, David Baltimore, Phillip Sharp, Gertrude Elion and J. Michael Bishop.

This year's symposium was organized by Dr. Terry Van Dyke, professor of genetics and biochemistry and biophysics and member of the Lineberger Cancer Genetics program, and Dr. Al

Baldwin, associate director for basic research.



Symposium speaker Dr. Pier Paolo Pandolfi from Memorial Sloan-Kettering speaks with a UNC symposium participant.



At the 9th symposium in 1985, Dr. Joseph Pagano (left) talks with Dr. Robert Gallo at the postdoctoral fellow luncheon.



Symposium speaker Dr. Lisa Coussens from UCSF talks with Dr. Jenny Ting.

## Dave Brummit Fund Supports Esophageal Cancer Research

Dr. Nicholas Shaheen from UNC Lineberger and Dr. Xiaoxin Chen from NCCU's Julius Chambers Biomedical/Biotechnology Research Institute have received a grant of \$10,000 from the Dave Brummit Fund of the Triangle Community Foundation to study the causes and prevention of esophageal cancer. This fund was founded to honor Dave Brummit, former director of technical support for SAS Institute, who died in Raleigh in October 2003 from esophageal cancer at age 58.

This research study will cost \$60,000 and the scientists hope it will lay the groundwork for a large, prospective clinical trial to evaluate prevention strategies. The two university research centers have committed \$50,000 between them to this initial study. The grant from the Dave Brummit Fund contributed the final \$10,000. ●

## Sisko Foundation Supports IORT Trials

The Sisko Foundation of Raleigh has presented Dr. Carolyn Sartor, co-director of the UNC Breast Center, a grant of \$10,000 towards the partial breast intra-operative radiotherapy trials (IORT) for which she is the principal investigator. This is an exciting opportunity to offer patients with small breast cancers more convenient breast-preserving therapy. The trial studies the safety and efficacy of a single-dose IORT delivered before breast tumor removal, and the ability to target tumors with higher doses of radiation while protecting surrounding normal tissue. ●



## UNC Lineberger 3<sup>rd</sup> Annual Beach Ball Successfully Buys Cancer Research

Close to 800 people attended the Third Annual Beach Ball at University Mall on April 8. The crowd topped last year's number of 680.

Event co-chairs Mary Seagroves and Jeanhee Hoffman led a superb group of 40 volunteers who transformed University Mall into a beach, complete with lifeguard stands, decorated sand pails, sand castle, and beach towels made just for the occasion.

A still video donated by Bill Baucom featured cancer patients and was shown throughout the evening. An eight-foot ribbon of patient photos hung in the window of Tyndall Gallery.

Sponsors and ticket package holders attended an elegant pre-party upstairs at A Southern Season's cooking school.

The band, Liquid Pleasure, drew many people to the dance floor with lots of

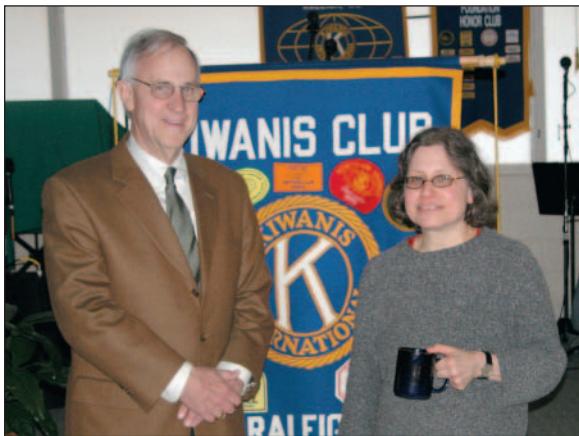


Dr. Stuart Gold and Jennifer Holbrook, mother of pediatric cancer patient Reece Holbrook.

(left to right) Jeanhee Hoffman, event co-chair; Mary Seagroves, event co-chair; Anne Cates, UNC Lineberger Board of Visitors chair; Dr. Shelley Earp, UNC Lineberger director; Edwina Woodbury, UNC Lineberger Board of Visitors vice chair; Dennis McGill, Woodbury's husband and Board of Visitors member

swaying and toe tapping on the sidelines, and during the evening, conga lines of enthusiastic revelers snaked around the dance floor. And a lavish buffet was provided by Spice Street with desserts from Café Carolina and Bakery.

The live and silent auctions netted over \$22,000 with the package of UNC-Duke basketball tickets and a signed UNC men's team ball going for \$2300. Auctioneer Buck Taylor kept the bidding fast and fun. Raffle proceeds of \$3130 were split between UNC Lineberger and Mark Moshier, the lucky winner. Initial estimates are that over \$110,000 was raised from the event, bringing the total for the three years to almost \$300,000. ●



Dr. Julie Blatt (right) was the guest speaker at the Raleigh Kiwanis Club on March 10. Blatt spoke about the UNC Pediatric Oncology Program. With her is S. Hardy Duerson, Club member and UNC Lineberger Board member.



The UNC-Chapel Hill chapter of Zeta Tau Alpha held its 17th annual Franklin 5K on February 11, and UNC Lineberger was a recipient of the proceeds. Judy Swasey, nurse practitioner with the UNC Breast Center and director of Sole Sisters, spoke at the event on behalf of Lineberger. Pictured above are ZTA Race Co-chairs Ellen Withrow (left) and Shelly Schaaf (right) with Judy Swasey.



North Carolina Central University's Iota chapter of Phi Beta Lambda, Inc. held its annual Walk to Cure on January 28. UNC Lineberger receives funds from the event for the UNC Breast Center. Pictured (left to right) are Beth Fogel, nurse coordinator for the UNC Breast Center; Lazarus Banks, a Phi Beta Lambda member; and Sonya Scott, advisor.

## Triad Golfers Against Cancer

The Triad Golfers Against Cancer (GAC) recently made a generous contribution of \$100,000 to UNC Lineberger. This organization is a vehicle for golfers and non-golfers alike to

raise money to support groundbreaking cancer research being done at North Carolina's comprehensive cancer centers. The Triad GAC contributed \$80,000 to support Dr. Robert Orłowski's project focused on "Targeting the Immunoproteasome as a Strategy Against Hematologic Malignancies." In addition, the group contributed \$20,000 to support Dr. Norman (Ned) Sharpless and Dr. James Bear and their project, "Tracking How Melanoma Metastasizes."

The Triad Golfers Against Cancer is an affiliate of the national Golfers Against Cancer organization, established in 1997 by a group of Kingswood, Texas golfers who wanted to raise money for cancer research. To date, GAC has raised over \$7 million. ●



Dr. Bruce Lyon, Chairman of the Triad Golfers Against Cancer, presents a check to Dr. Shelley Earp, Director of UNC Lineberger.

Visit [www.unclineberger.org](http://www.unclineberger.org) to read the latest on the new cancer hospital and subscribe for free, on-line cancer news updates.

# Raleigh Sports Club Honors Coach Sylvia Hatchell

On April 20, 2006, the Raleigh Sports Club honored UNC Women's Basketball Coach Sylvia Hatchell along with Kay Yow of NC State and Gail Goestenkors of Duke. Over 500 people attended the tribute dinner and roast at the RBC Center and thanked these three women for their amazing contributions to the Triangle and to women's basketball.



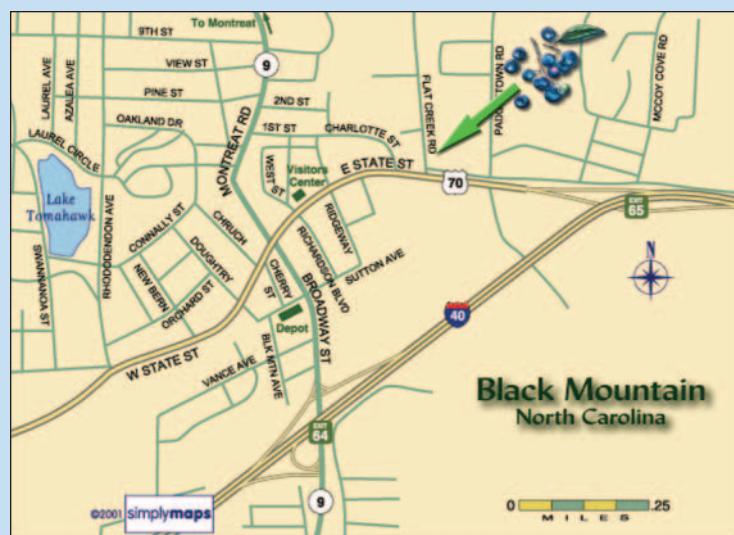
Coach Hatchell and Patricia Sayers, an ovarian cancer survivor from Cary, NC, and Coach Hatchell's special guest at the event.

Each coach chose to highlight a charity at the event, and Coach Hatchell chose UNC Lineberger Comprehensive Cancer Center. Coach Hatchell's relationship with UNC Lineberger began in 2000 when she had a cancer scare. Everything turned out fine for Coach, but ever since she has helped raise money and awareness for the ovarian cancer research program at the Cancer Center.

Over the years she has personally donated a percentage of women's basketball season ticket sales and proceeds from her pick-your-own blueberry patch on her land outside of Asheville, NC. ●

Coach Hatchell has just planted 54 more blueberry bushes and expects to have a bumper crop this year! This June plan to take a visit to Black Mountain to pick some blueberries and support cancer research!

**DIRECTIONS:** Take I-40 West to exit #65-70W & E. State Street West toward Black Mountain. Go 1/2 mile; turn right onto Flat Creek Road; go .2 mile to 143 Flat Creek Road.



## calendar *of events*

J U N E 2 0 0 6

*10th* Tenth Anniversary NC Triangle Komen Race for the Cure, Raleigh, NC

S E P T E M B E R 2 0 0 6

*15th* UNC Lineberger Board of Visitors Meeting, Chapel Hill, NC

O C T O B E R 2 0 0 6

*5th* Tickled Pink Women's Cancers Luncheon, Squids, Chapel Hill, NC

*10th* Tickled Pink Women's Cancers Luncheon, Galloway Ridge, Pittsboro, NC

*13th* Second Annual Fast Break with Roy Williams Breakfast, Smith Center, Chapel Hill, NC

UNC Lineberger Comprehensive Cancer Center  
CB# 7295  
School of Medicine  
University of North Carolina at Chapel Hill  
Chapel Hill, NC 27599-7295  
(919) 966-5905  
www.unclineberger.org

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