Cancer-killing protein found by researchers

BY JIM DRYDEN

School of Medicine researchers have found that a protein called cyclooxygenase-2 (COX-2) binding protein 2 (CUGBP2) can destroy several types of cancer cells. When the team inserted the protein into cultured tumor cells, more than 70 percent of the cells died.

The team's study appeared in the Jan. 17 issue of the journal Molecular Cell. The researchers found that CUGBP2 helps regulate production of cyclooxygenase-2 (COX-2), which is better known as a key culprit in rheumatoid arthritis.

"The gene that produces COX-2 is turned over very early in cancer, so there has been a lot of research to see whether intervening with it might be an effective therapy," said principal investigator Shrikant Amant, Ph.D., assistant professor of medicine. "If COX-2 is turned on in early tumor cells, it also might be an effective therapy to destroy several types of cancer in its early stages."

In cancer cells, COX-2 levels also rise and trigger production of prostaglandins. The prostaglandins bind to tumor cells and help tumor cells and normal cells grow and divide. They interfere with the immune system and make it easier for cancer cells to spread.

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University Libraries is sponsoring a film series for Black History Month.

The series will feature a number of films that are part of the Libraries’ new Film and Media Archive, established in 2001 after the acquisition of the collections of Blackside Inc., the largest African-American-owned film production company of its day.

The screenings, which are free and open to the public, are as follows:

- Feb. 16, 5-30 p.m., Brown Hall, Room 100, "Black Film: Subjects and Genres."
- Feb. 24, 3:30-5 p.m., Brown Hall, Room 100, "Out of the Box: America's War on Pornography." For more information, contact the University of Tulsa.

Washington University in St. Louis is celebrating its 150th anniversary in 2003-04. Special programs and events will be announced as the yearlong observance approaches.
School of Medicine

Researchers have found that infants who share a bed with an adult are at a greater risk of Sudden Infant Death Syndrome (SIDS). In addition, new research shows that infant deaths due to bed sharing are far more common in African-American populations than in other races.

Despite the decreased SIDS rate since the inception of the National Institute of Health (NIH) ‘Back to Sleep’ intervention program in 1994, the racial disparity in SIDS deaths is incrementally decreasing, according to University researchers.

The study, which appears in the February issue of Pediatrics, reports that SIDS rates are not decreasing as fast as they should.

We believe that the rise in SIDS is the result of racial disparity,” said study leader Bradley T. Thach, M.D., the School of Medicine’s chief of pediatrics. "Unluckily, it is a fact that bed sharing is the reason behind the racial disparity," said study leader X.F. Zheng, who is an investigator with the Children’s Hospital of St. Louis and Barnes-Jewish Hospital.

The researchers identified these actions probably cause the risk of SIDS in infants who bed share. However, advice on bed sharing involves the community and private groups has initiatives to reduce the risk of SIDS in infants who bed share, particularly when the infant is less than 14 days old, with siblings, shares a crib or uses pillows and bumpers.

Researchers add that sleep-related risk factors include positioning, unsafe sleep surfaces and bed sharing are the most prevalent factors increasing the risk of SIDS. Over the past five years, a consortium of U.S. agencies and private groups has initiated campaigns targeted to African-Americans that are designed to reduce the racial disparity in SIDS deaths by stressing key child care practices, including back sleeping, using a firm mattress, getting parents to quit smoking and avoiding overheating and avoiding soft bedding.

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Journalist Judith Miller to speak for Assembly Series
By NADINE GUBNER
Judith Miller — an author, a Pulitzer Prize-winning investigative reporter for The New York Times, a foreign correspondent and renowned expert on Middle East issues — will deliver the College of Arts and Sciences Lecture Series this fall.

Her lecture is called “A View from the Middle East.” Miller, a Pulitzer Prize-winning investigative reporter for The New York Times, has covered both national politics and foreign affairs, with a special emphasis on the Middle East and the former Soviet Union.

She was extensively written on nuclear war and concentration on the effects of the cold war, as well as the biological and germ warfare in her most recent book, “Between Jerusalem and America’s Secret War,” co-authored with William Broad and Stephen Weissman.

In 2001, she was one of a small team of investigative reporters that won a Pulitzer Prize for a 2001 series on Osama bin Laden and Al Qaeda.

Her career began with a position as Washington bureau chief of The Progressive magazine, the nation’s second-oldest radical weekly. After becoming a correspondent for The New York Times in 1977, she was named the first female chief of the Times’ Cairo, Egypt, bureau in 1983, responsible for covering news of the Arab world. In 1986, she became the Times’ special correspondent in Paris, then returned to the United States the next year to serve as news editor and deputy chief of the Washington bureau.

Miller then worked for 11 years as the correspondent for Woodbridge Playwrights Laboratory at 4 p.m. Church Hall, 935-5285. Miller became a full-time investigative journalist in 2001 and is a contributing writer for The Progressive.

She is a member of the American Society of Newspaper Editors, the International Society of World Journalists and the National Press Club.

Miller is a graduate of the University of California at Berkeley, where she received a degree in English. She has also been a visiting professor at the University of California at Berkeley, where she taught a course on Middle Eastern literature.

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Rhythm in Shoes, The Red Clay Ramblers at Edison

By ELM DVEY

D
town St. Louis and the Edison Theatre OVATION! Series will present Ramblehouse, a celebration of the American roots of Rhythm in Shoes, those Dayton-born brotherly troubadours of American dance, and The Red Clay Ramblers, the Tony Award-winning group of roots music collection.

Washington University, Feb. 14. 5

Thursday, Feb. 20

Music

Friday, Feb. 14


Summit, Feb. 16

Music

Thursday, Feb. 17

At 7 p.m. Feb. 17, Pollitt will host a “Subject to Debate” reading at the Victory Campus Center. And at 4 p.m. Feb. 18, Pollitt will lead a writing workshop, and take questions from the audience in the Edison Theatre. On Feb. 19, 7 p.m., Pollitt will host a screening of “In the State We’re In,” in the Hall Room 115. Pollitt will host two events, and reception will follow each program, and copies of Pollitt’s books will be available for purchase. Pollitt will announce the events and the receptions, which will be open to the public.


Pollitt’s book of poems, Antarctic Traveller (1982), won the National Book Critics Circle Award and the National Book Award. Other honors include a fellowship from the Guggenheim Foundation, the National Book Critics Circle Award, a Rockefeller Foundation grant, and a National Endowment for the Arts grant.

Pollitt’s long association with the National Endowment for the Arts has resulted in numerous honors and awards, including the Oscar, the Grammy Award-winner Shawn Colvin, a Red Clay Rambler for more than two decades. Colvin's Second Place film<br>took<br>of<br>The<br>right<br>contemporary. According to The New York Times, "a fantasy madhouse kid from a vanished rural America." The group has since toured more than two dozen countries and released over a dozen albums. That long association with the theater includes the original New York production of "Translations of the Mind" (1975) and "Theatricals" (1975).

Pollitt's book of poems, "The Red Clay Ramblers" and the poet’s book of poems, "The Red Clay Ramblers," are considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollitt's book of poems, "The Red Clay Ramblers," is considered among the finest contemporary roots music. According to The Chicago Tribune, "With passion and word play, Pollitt brings an intense, personal, and truly audacious touch to the act of writing itself." Pollitt "writes the liveliest, smartest, most tuneful and vivid as her characters are complex..." Pollit...
Basketball

Washington University in St. Louis is the winningest four-year class in

Senior guard Diana Hill drives to the hoop against the University of Rochester earlier this year. Hill leads the Bears with 74 assists and is the team's 3-point leader.

Protein

Can destroy several
types of cancer cells

The gene responsible for protein breakdown, CUGBP2, may be one type of protein that could be targeted for cancer treatment, according to Anant Dieckgraefe and his colleagues.

CUGBP2 might play a central role in tumor-cell survival or death, they say.

"CUGBP2 may be one type of master switch used by the cell to control key pro-
telites," said co-author Brian K.

Dieckgraefe, M.D., Ph.D., assis-
tant professor of medicine.

"Proteins like COX-2 need to be tightly regulated to avoid uncontrolled growth. That may be why CUGBP2 levels are significantly lower in every single cancer cell studied," said Anant.

"We have always tried to stress taking one game at a time," said head coach Fahey. "I know that sounds clichéd, but if you don't prepare for one game at a time, not only are you more likely to trip up during the whole you lose sight of the big picture.

"You have to be all, and it should be fun, so we try to enjoy each one. Obviously, winning the last game would be the most fun, but we try to enjoy all the games, the way it winds up and off the court, and I think that's been a big part of our success," Rudis said.

"We've gotta have fun," Rudis said. "Both programs put in too much effort and play basketball to get there. We don't get paid, and we don't get a lot of new. They've spent years becom-
ing an overnight success.

The deep and talented women's team is led by six seniors that have the Bears humming along like so many teams that lack any consistency.

"Washington U. is averaging nearly 12 points per game and winning by an average of 25 points — despite the fact that not every game player average above 12 points or 23 minutes per game. "The game is built on a top-
down process," senior Jennifer Rudis said. "The athletic depart-
ment provides the funds and sup-
port, which brings in good coach-
es who make the program excit-
ing. And an exciting program brings good players.

When you have the top-
ranked team in the nation, every opponent plays a little harder and gives a little more effort. Both are better than you could ever imagine. Each one wants to be the best. Each one wants to be better.

"If it's one guy one night and another guy the next night, it's something that makes them so special?" said head coach Andy Rudis. "I know that sounds clichéd, but if you don't prepare for one game at a time, not only are you more likely to trip up during the whole you lose sight of the big picture.

"You have to be all, and it should be fun, so we try to enjoy each one. Obviously, winning the last game would be the most fun, but we try to enjoy all the games, the way it winds up and off the court, and I think that's been a big part of our success," Rudis said.

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The following are among the significant honors and awards received by Peter Chivers, Ph.D., assistant professor of pediatrics, as well as a recipient of a three-year, $229,803 grant from the March of Dimes Birth Defects Foundation for research titled "Role of Heparan Sulfate in Slit Mediated Axon Guidance."

Other honors include the following:

- Received a five-year, $750,000 grant from the National Institute of Neurological Disorders and Stroke for research titled "Genetic Analysis of Synaptic Protein Networks in the Mouse and Human Brain."

- Received a five-year, $582,243 grant from the National Institute of Neurological Disorders and Stroke for research titled "Pulmonary and Critical Care Medicine: Mechanisms and Treatment of Pulmonary Infections."
Healing hearts

Michael E. Cain has led the translation of arrhythmia laboratory findings into clinical advances

By GILA Z. REICHERS

Michael E. Cain enjoys taking trips with wife Peggy and children Meredith and Michael.

Thanks to two decades of collaborative research, Michael E. Cain, M.D., and his team of cardiology specialists can proudly boast the two words coveted by all clinical scientists: "problem solved."

When Cain chose to specialize in cardiac electrophysiology—the examination of the heart's electrical system—physicians knew little about the many abnormal heart rhythms that affect the upper and lower chambers of the heart. Moreover, they had few ways of treating, let alone curing, these rhythm disturbances.

Now, thanks to researchers like Cain who have successfully translated laboratory findings to clinical advances, all forms of arrhythmia—heart rhythm abnormalities—are treatable, and most now are curable using minimally invasive, catheter-based procedures.

"The initial focus of our work was on sudden cardiac death," says Cain, the Tobias and Horstmann Lewin Professor of Cardiovascular Diseases. "The reassuring part of that process is that after 20 years, we now can better risk-stratify people and, more importantly, we now have effective treatments such as the implantable cardioverter defibrillator, which truly prevents people from dying prematurely. It's a win-win for everyone." 

Of course, there are still plenty of unanswered questions in the pursuit of understanding the heart's electrical system, and Cain continues his pursuit of that effort, both as a clinical scientist and as director of the School of Medicine's Cardiovascular Division.

"Michael is an exemplary leader both in research and in administering his division," says William A. Peck, M.D., dean of the medical school and executive vice chancellor for medical affairs. "He adeptly balances the school's tripartite mission of research, clinical and teaching excellence and has helped shape the division's reputation in one of the most respected heart teams in the country."

Right place, right time

The field of clinical cardiac electrophysiology is as young as Cain's medical degree. When he first decided to focus on cardiology and, more specifically, on the heart's electrical system, in the mid-1970s, only a handful of experts in the United States were dedicated to this emerging specialty.

So after five years of advanced cardiac and internal-medicine training at the University and Barnes-Jewish Hospital, Cain returned to his native Philadelphia to gain experience at the University of Pennsylvania.

Equipped with expertise and eager to broaden the field, Cain returned to St. Louis in 1981 and joined the faculty at Washington University. Having completed much of his training here, Cain was convinced that the institution was perfect fit.

"There was a palpable feeling that the institution thinks to achieve excellence through collaboration and cooperative effort, "he says, "with the mentality that we'll accomplish more if we work together."

The school's emphasis on teamwork and interdisciplinary efforts was particularly critical, in Cain's opinion, for developing a program of excellence in clinical electrophysiology.

He convinced the medical school and Barnes Hospital to team up to establish its modern-day arrhythmia service and clinical cardiac electrophysiology laboratory.

He also helped recruit the initial team of engineers including: B. Martin Arthur, Ph.D., professor of biomedical engineering, clinical electrophysiologist (Bruce D. Lindsay, M.D., associate professor of medicine, and John P. Boitnott, M.D., professor of medicine, of surgery and of biomedical engineering); basic scientists (Jeffrey E. Saffitz, M.D., Ph.D., the Paul E. Lacy and Ellen Lacy Professor of Pathology and Immunology and professor of medicine); and a cardiac surgeon who specialized in electrophysiology—the renowned James L. Cox, M.D., now retired.

The group witnessed and helped lead a drastic evolution of technology and knowledge in clinical care.

Before the '70s, information about a patient's heart rhythm could be gleaned only indirectly from analysis of the electrocardiogram.

During the late '70s and early '80s, direct recordings of the human heart's electrical system during open-heart surgery became possible through the use of computerized mapping systems developed at the University.

The data acquired during heart surgery provided new insights into the mechanisms of human arrhythmias and led to the development of curative surgical approaches for several arrhythmias and to the development of the Maze procedure, the first cure for atrial fibrillation, the most common type of abnormal heart rhythm.

These breakthroughs then led to the modern era of catheter-based approaches for curing most cardiac arrhythmias. Beginning in the '70s, clinical cardiac electrophysiologists began adapting these tubes, called catheters, to thread a wire with electrodes into a patient's blood vessel, advance the catheter to the heart and record a patient's heart's rhythm without making a single invasive chest incision.

Information from catheter recordings in both humans and experimental animals led to more accurate diagnoses and to the development of precise, catheter-based procedures that destroy the electrical circuit responsible for a given arrhythmia.

Now, clinical cardiac electrophysiologists are able to cure most cardiac arrhythmias using this catheter-based approach.

"We have done some pioneering work as a group, more of which would have been possible had we not had a diverse team of experts work together, "Cain says. "Collectively, we were able to help define the mechanisms of several human arrhythmias and develop curative, smart, non-pharmacological approaches based on that information."

"It's very rewarding to have made such an impact, and it's especially satisfying to watch the next generation of clinical cardiac electrophysiologists at the University take the field to the next level."

Balancing act

Inspired by academic and clinical mentors during his training, Cain discovered the importance of coupling basic science with clinical work. Little did he know that he would later need to balance far more than that.

In addition to wrangling his family together each year for a week of boating on the East Coast and a week of skiing out West, Cain maintains a tremendously busy calendar.

In the clinic and laboratory, he continues to focus on developing and using new recording and mapping methods to determine which patients are at risk for sudden cardiac arrest and to treat electrical abnormalities. But these days, his time is largely occupied with the chal lenge of administering the medical school's team of 72 cardiology faculty members.

"I enjoy the challenge of providing an environment that enables our faculty to excel in our clinical, teaching and research operations," Cain says. "I try to lead by example, maintain an open administration and ensure that people feel they have ownership of the division and are recognized for their contributions."

"We have a group of very talented, bright individuals, and to not take advantage of that resource would be a wasted opportunity," Cain adds.

The rest of his time is spent leading a variety of other organizations, for instance serving as president of the American Society of Pacing and Electrophysiology (sooner to be renamed the Heart Rhythm Association) and president of the Association of Professors of Cardiology.

"Michael is insightful and has a very clear vision of the contributions that academic medicine can make both to our community as well as to society as a whole," says James F. Crane, M.D., associate vice chancellor for clinical affairs and chief executive officer of the faculty practice plan. "He's been one of the key people on our faculty in moving the medical school forward in terms of its reputation locally, nationally and internationally."

Michael E. Cain, M.D.

Academic title: Tobias and Horstmann Lewin Professor of Cardiovascular Diseases and Head of the Cardiovascular Division

Degrees: B.A. cum laude, Gettysburg College (1977); M.D. George Washington University School of Medicine (1975)

Family: Wife, Peggy; daughter, Meredith, 25; son, Michael, 16

Hobbies: Skiing, boating.