

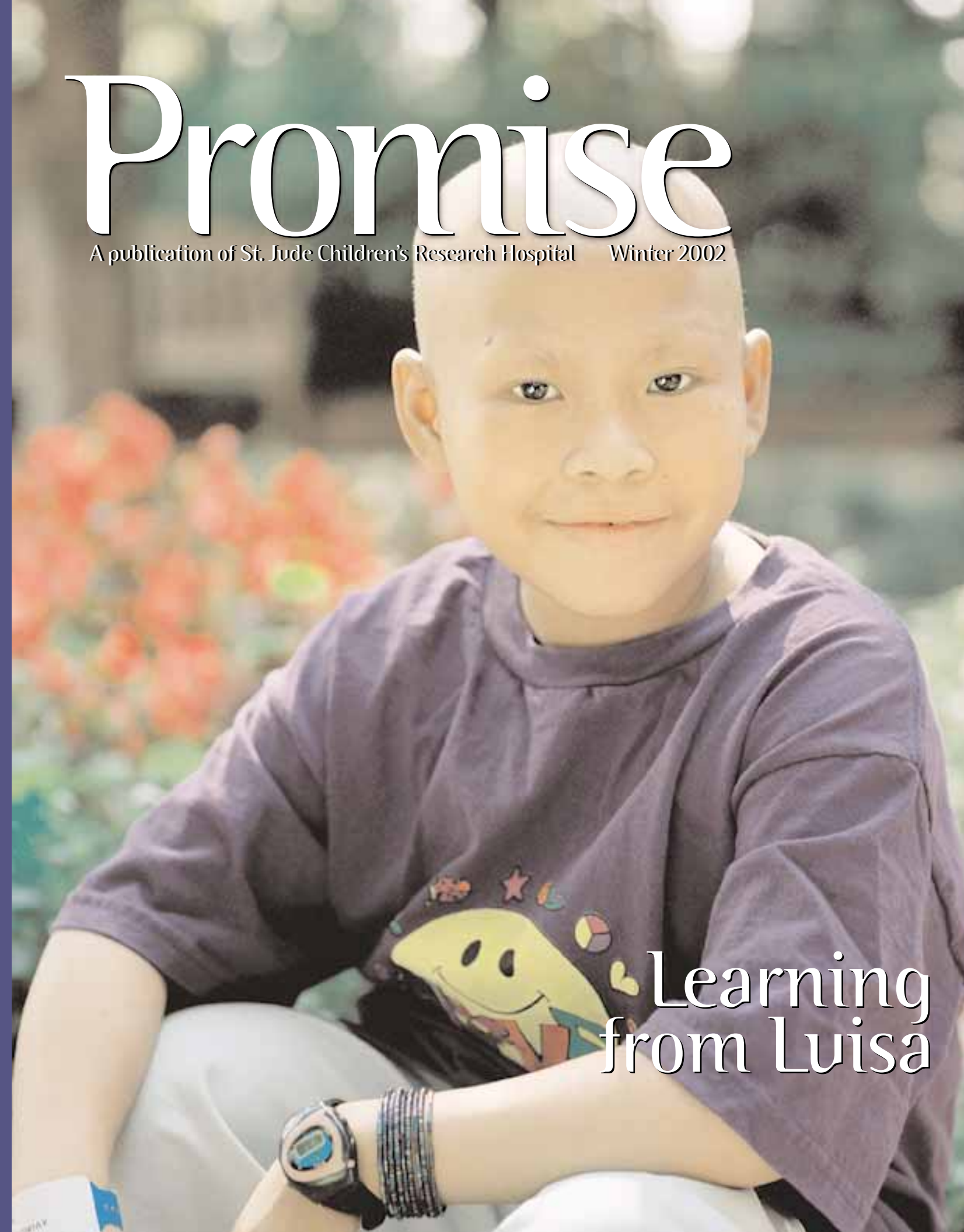
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Promise

A publication of St. Jude Children's Research Hospital Winter 2002



Learning
from Luisa



St. Jude Children's
Research Hospital

ALSAC • Danny Thomas, Founder

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St. Jude Children’s Research Hospital was founded by the late entertainer Danny Thomas. It opened February 4, 1962. The hospital was created because of a promise Danny made during the depression era to St. Jude Thaddeus, the patron saint of the hopeless.

“Show me my way in life,” Danny prayed. In return, Danny promised to build St. Jude Thaddeus a shrine. That shrine became a hospital that would treat children regardless of race, color, creed or their ability to pay. This remarkable event also inspired the name of this magazine,

Promise.



Promise

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St. Jude Children’s Research Hospital’s mission is to find cures for children with catastrophic diseases through research and treatment.

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Highlights

Scientists and clinicians at St. Jude Children's Research Hospital demonstrate their dedication every day by sharing their research knowledge with the rest of the world.

NHL news

Survivors of childhood non-Hodgkin lymphoma (NHL) are 10 times more likely to develop other cancers than the general population. But in the journal *Cancer*, a St. Jude researcher says the news is not as disheartening as it may seem. "Contemporary treatment strategies at St. Jude have doubled the survival rate of childhood NHL from about 40 percent 20 or 30 years ago to the current rate of 80 percent, without increasing the risks of developing other cancers," says principal investigator Wing Leung, PhD, Hematology-Oncology. "It's very encouraging." Leung's findings are important to doctors who can now be on the lookout for new bouts of cancer in survivors of childhood NHL.

Inciting citations

Charles Sherr, MD, PhD, Tumor Cell Biology chair, and Michael Kastan, MD, PhD, Hematology-Oncology chair, are among the top 20 most cited scientific authors of the 1990s according to *Essential Science Indicators*, which provides statistics on the impact of research authors, institutions, countries and journals. Eleven of Sherr's papers have been cited a total of 8,545 times, and seven of Kastan's have been cited 7,832 times.

Understanding infections

Understanding the intricate chemical warfare between host cells

and stealthy invaders could lead to the development of a new category of drugs that help cells resist infection, according to a St. Jude cell physiologist. In *American Scientist* magazine, Erich Gulbins, MD, PhD, and a research colleague in Germany report that if a pathogen, like a virus or bacteria, can be prevented from entering and hiding in host cells, it will be visible to the immune system and possibly killed by the body's defense mechanisms. Pathogens are less likely to evolve resistance to drugs that work in this way. The investigators reviewed recent research and implications for drug development.

Launch of a journal

Two St. Jude researchers have accepted positions on the editorial board for a new peer review journal devoted to all aspects of cancer research. James Downing, MD, Pathology chair, and Charles Sherr, MD, PhD, Tumor Cell Biology chair, will join a cadre of the world's leading cancer researchers in editing *Cancer Cell*. The journal will launch in February. Its publishers envision that *Cancer Cell* will become the definitive journal for cancer research.

Molecular whodunit

An article titled "A Molecular Whodunit," written by Robert Webster, PhD, of the Infectious Diseases department, was published in a recent issue of *Science*. In the article, Webster offers his

views on recent influenza-related studies. Since 1975, Webster's influenza research laboratory at St. Jude has served as the World Health Organization's Collaborating Center for the Ecology of Influenza Viruses in Lower Animals and Birds. It is the world's only laboratory designed to study influenza at the animal-human interface. As a result of the *Science* article, Webster was featured in *The New York Times*, *The Philadelphia Inquirer*, *The San Francisco Chronicle*, and on National Public Radio's *All Things Considered*, *MSNBC.com*, Yahoo news, Excite news and other media.

ALL advances

By studying the genetics of leukemic and normal cells and by learning how genetic differences influence patients' drug responses, scientists are revolutionizing the treatment of childhood acute lymphoblastic leukemia (ALL), according to an article published in *Lancet Oncology*. Ching-Hon Pui, MD, and Dario Campana, MD, of Hematology-Oncology and Pathology, and William Evans, PharmD, Pharmaceutical Sciences chair, reviewed advances that may be used to improve the ALL cure rate. "Advances in biotechnology and the Human Genome Project have accelerated progress in leukemia research," Pui says. "Someday, it is quite possible that childhood leukemia can become a uniformly curable and even preventable disease."

Passing the Torch

GIL MICHAEL; COURTESY OF THE UNIVERSITY OF MEMPHIS

A pioneer in treating infectious diseases funds a new generation of scientists.

By JOE HANNA

match. "I have a little money and I try to put it to good use," Feinstone says.

Feinstone and his family moved to America from Pultusk, Poland, in 1921. After graduating from the University of Arkansas, he completed a Chemical Foundation fellowship at The Johns Hopkins University, where he conducted research on a new wonder drug, sulfa. This precursor to modern antibiotics would be a boon to individuals battling bacterial infections. Drugs developed in Feinstone's laboratory saved thousands of

publicly well known for his patented active ingredient that was used in Di-Gel, Mylanta and others. Retiring in 1976 from a research career in industry, Feinstone accepted an appointment as distinguished research professor at The University of Memphis, working on viral antibiotic activities until his second retirement in 1996.

His gift of \$2 million to St. Jude includes an outright gift of \$250,000 and yearly payments of the same amount from his charitable lead trust for seven years. These gifts will establish an endowed chair in Infectious Diseases. After the funding is completed, the remaining assets in the trust will benefit Feinstone's heirs.

"I have always been greatly impressed with all the good work St. Jude was doing," Feinstone says. "They have some of the best laboratory facilities I have seen." But it is not just the physical aspects that enflame Feinstone's scientific mind. "What's important is the work that is going on there," he says.

"Dr. Feinstone has saved many lives with the discoveries of medicines in common use today," says Tuomanen. "His generous gift continues the tradition by enabling the search for even more cures for infectious diseases of children."

For more information about a charitable lead trust or other type of gift, call the Gift Planning department at (901) 578-2108, or 1-800-877-5833, ext. 2108.●



Harry Feinstone, ScD, has created a charitable lead trust to endow a chair in Infectious Diseases.

Harry Feinstone, ScD, recently made a \$2 million commitment to support the work of St. Jude Children's Research Hospital's Infectious Diseases department. His gift came almost 60 years after he helped pave the way for modern treatments of infectious diseases.

When Feinstone called the hospital wishing to make a generous donation, the St. Jude chair for Infectious Diseases, occupied by Elaine Tuomanen, MD, had yet to be endowed. Feinstone already had a deep interest in infectious diseases, since he had helped develop the first drugs to combat common bacterial infections. It was a perfect

lives during World War II. After graduating from Johns Hopkins in 1939, Feinstone served as director of the chemotherapy laboratories for American Cyanamid Co. For years, his labs produced most of the world's clinically useful sulfa drugs. He later served as consultant to several chemical companies, simultaneously managing his own independent research laboratory.

Through the years, Feinstone developed some 400 products for various pharmaceutical companies, including a patented antihistamine drug that was used in a popular cold remedy, as well as in prescription products. Perhaps he is most

Gopal Murti has dedicated his life to helping St. Jude fight catastrophic childhood diseases, and when his daughter needed help, St. Jude was there.

Family Circle

BY TANUJA SURPURIYA



The class: *Psychology 3010*

The assignment: *Write about your earliest memory*

The memory: *St. Jude*

Surekha Murti thinks it is a little strange. But no matter how much she racks her brain, the hospital is what keeps coming to mind. The memories run together—some good, some bad, all centering around the chemotherapy treatments she received after a leukemia diagnosis at age 2.

“I remember sitting in a room and it was me, my mom and a nurse, who had a pair of scissors,” says Surekha, now a 22-year-old pre-med student at East Tennessee State University in Johnson City. “We were thinking we didn’t need to cut all my hair, since only a little had fallen out. But the nurse came up to me and just picked up my hair, and it all lifted up off my head in one clump.”

She also remembers the glass partition between her and the rest of the world when the chemothera-

py left her immune system too weak to risk visitors. Her big sister pouted on the other side because they couldn’t play.

And then there were the special shoes that allowed for IVs in her feet, the frightening spinal taps and finally, the long nights when her dad stayed at her bedside watching *Hawaii Five-0* with her.

“I guess it’s kind of crazy that those are the things I remember,” Surekha says. “I guess it’s because all that was such a big part of my life from the very beginning.”

The “all that” was acute lymphoblastic leukemia (ALL), and cancer wasn’t just a big part of Surekha’s life. It was and would continue to be important to her whole family.

Images with impetus

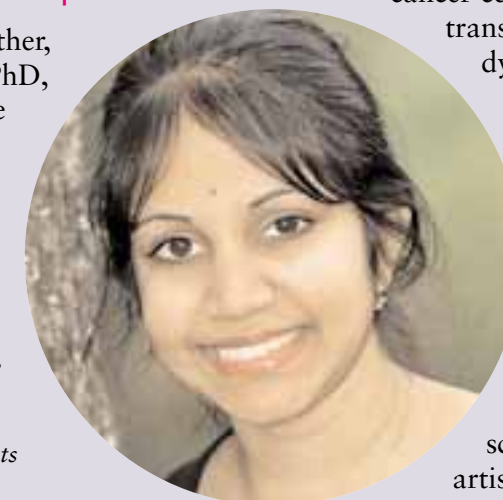
Surekha’s father, Gopal Murti, PhD, has been on the front lines of

the battle to wipe out cancer for 26 years. As director of Scientific Imaging Shared Resource, Gopal helps St. Jude researchers see enemy cells magnified through his powerful microscopes and colorful images. He never forgets his mission. “You can’t ever forget why we’re here,” he says. “We’re here to cure children, and whatever we can do, we must do with a lot of determination. It still bothers me to see children sick. These are beautiful children, but horrible diseases.”

The emotion in his voice shows his compassion for the patients. “I love all children,” he says. “They don’t have to be mine. When you come here and you see them, it makes you really want to do something great.”

Gopal Murti is doing just that. He captures static images of cancer cells and viruses and transforms them into

dynamic colorful illustrations. The key to a good image is that it must be both scientifically significant and aesthetically pleasing. Gopal sees himself as a cross between a scientist and an artist. “When I see an



AT LEFT: Sisters Aparna, Suvarna and Surekha Murti are all interested in medical research, inspired by their parents, Gopal and Aruna Murti. Their father, a longtime St. Jude faculty member, is director of Scientific Imaging Shared Resource.

AT RIGHT: As a child, Surekha told her father she wanted to grow up to be a physician so that she could come back to St. Jude and give spinal taps to her doctor, Gaston Rivera, MD. Although the thought of spinal taps still makes her shudder, Surekha now counts Rivera among her favorite people at St. Jude.

image, I can see beyond the science,” he explains. “I can imagine how it will be displayed and how it will make a lasting impression. But at the same time, I understand the cell structure. I have the scientific background to back it up.”

He has the awards to back it up, too. Gopal earned sixth place at the 2001 Nikon International Scientific Photography Competi-



tion and first place in the cell culture category at the Sigma 2000 International Life Science Photo Contest. His images have graced the covers of numerous publications, including *Time* magazine and Europe’s *EMBO Journal*.

Robert Webster, PhD, of the St. Jude Infectious Diseases department, says Gopal’s contribution to the hospital has been invaluable. “He has kept St. Jude on the cutting edge,” Webster says. “He does outstanding work. When you can see the enemy, you are better off, and his work allows us to visualize the cancer cell and see how it interacts with everything else.”

Gopal credits his staff, Donna Davis and Ken Barnes, with keeping the standard of excellence in his department high. “Whenever researchers have something really strange going on, they come to us for visual help,” Gopal explains. “Then they can look at it and go back to the lab to find out what is happening. This gives them the impetus to do more work.”

After nearly three decades, Gopal is still amazed at the level of research and treatment St. Jude offers. “I don’t know where you will find better expertise from all areas of medicine than right here,” he says.

It’s not just workplace pride that inspires those words. It was that expertise that saved his daughter’s life 20 years ago.

A new perspective

The Murti family began a personal fight with cancer in 1982, when Aruna Murti, PhD, noticed red spots on her daughter’s body. That night, the Murtis took Surekha to see a friend who was doing a fellowship at St. Jude. The next morning, they took Surekha to their pediatrician, also a fellow at St. Jude. Within hours, Surekha was a St. Jude patient under the

care of Gaston Rivera, MD. “You could go to a hundred pediatricians in family practice and they wouldn’t have figured it out, but these were all St. Jude people so they were sensitized to thinking in terms of cancer,” Gopal muses. “We were lucky they found out so quickly.”

But a speedy diagnosis hardly made the concept of cancer easier to digest. “This was 1982 when there was just a 50-50 chance of survival for childhood ALL,” he says. “It was traumatic for us. This was a beautiful little girl who had never gotten sick before.”

The experience was just as traumatic for Surekha. Although she now describes St. Jude as one of her favorite places, the spinal taps and bone marrow transfusions scared her so much back then that her father had to trick her into coming to the hospital.

After five years of treatment that included chemotherapy and cranial radiation therapy, Surekha won her battle with ALL. But it wasn’t until she began visiting the After Completion of Therapy Clinic—visits that she initially detested—that she began dealing with what had happened to her body. One person made all the difference: pediatric nurse practitioner Debbie Crom, RN, PhD. “I love her so much. I don’t know what I would have done without her,” Surekha says.

Crom challenged Surekha to start learning about leukemia and made the teen excited about coming to the hospital. The duo began a research project to determine the effects of radiation therapy on intelligence. Surekha turned the study into a science fair project and won top awards on local, national and international levels. The team conducted a follow-up project the next year, studying the effects of chemotherapy on intelligence. Surekha won top honors

SETH DIXON



Donna Davis, Ken Barnes and Gopal Murti, PhD, create fabulous photographs that garner international acclaim and help St. Jude researchers visualize ways to increase their levels of innovation.

for that project, as well. “Debbie was incredible,” says Gopal, who likens Crom to a “female Mahatma Gandhi.” “There is nothing in my lifetime that I could do to repay what she did for my daughter and my family,” he says. “To take that kind of time to ease the fears of one little girl takes a truly amazing individual.”

Special gifts

Surekha says she wouldn’t be the person she is today if not for the excellent doctors and caring staff at St. Jude. She also credits her parents, who still fuss over her for even minor ailments. Her father calls her his “special gift from heaven.”

Because of her father’s work and her experience, Surekha is considering a career as a pediatric oncologist. “I think that I could help kids since I’ve gone through it,” she says. “They can see me and know that they can get over it and be anything they want to be.”

Surekha and her father aren’t the only ones in the family interested in cancer research. Her mother researches anti-cancer and antiviral agents at the University of Tennessee, Memphis. Surekha’s older sister, Aparna, is a third-year medical student at UT who has worked summers at St. Jude. Surekha’s younger sister, Suvarna, is a high school student who recently won an international science fair competition for research

she conducted at St. Jude.

Murti never pushed his daughters toward science. “I only say to do what makes you happy and strive for perfection,” he says. “If you want to be a window washer, then do the best window washing in the whole world. I don’t want you to settle for mediocre; always strive for excellence.”

Murti follows his own advice. “For my part, I will get more money for the hospital, more exposure, anything it takes to help out the children,” he says. “For St. Jude, anything I can do, I will. I love my work. Even now I can say there is not one moment in the past 26 years that I did not enjoy being here. And we seem to be getting better all the time.” •

LEARNING FROM Luisa

BY ELIZABETH JANE WALKER

"IT'S AMAZING TAKING CARE OF A CHILD WITH RHABDOMYOSARCOMA FROM A PRIMITIVE CULTURE," SAYS SHERI SPUNT, MD, OF HEMATOLOGY-ONCOLOGY ABOUT ST. JUDE PATIENT LUISA MBYVANGUI. "AT FIRST, YOU THINK THAT THESE PEOPLE ARE DIFFERENT FROM US. BUT THEN YOU REALIZE THAT THEY GET THE SAME DISEASES AND THE SAME PROBLEMS AND THAT THEY CRY ABOUT THE SAME THINGS WE CRY ABOUT. IT REALLY IS A LESSON IN HUMANITY."

Child in metallic Barbie shoes and a stylish T-shirt, Luisa Mbyvangui plays a computer game in a St. Jude Children's Research Hospital waiting room. As she concentrates on the screen's digital images, the 8-year-old girl is a reflection of American popular culture. Her backpack is a jaunty hot pink. Her preferred dessert is Jell-O. *Baywatch* is her favorite television program. But these are newly acquired tastes. A year ago, Luisa had neither heard of Barbie, tasted Jell-O nor glimpsed a TV. She lived in an environment that, while rich in

tradition, is one of the planet's most primitive cultures. Then a life-threatening illness became her passport to an alien world.

Luisa's trek to St. Jude might more accurately be measured in centuries than in miles. In her village of Puerto Barra, hunters wield enormous bows and arrows to hunt monkeys, which are then grilled over open fires. This diet is supplemented by such delicacies as deer, armadillo, paca (boar), wild honey and grubs. Luisa's father, Angel Tatunambia, is chief of a 36-family community. Until missionaries arrived in the region in the 1970s, Angel's people, the Ache (pronounced ah-chay), had lived as hunters and gatherers for millennia. Because most of their hunting grounds have been deforested, the Ache now raise manioc, soy, corn and poultry. These native inhabitants of eastern Paraguay have a colorful history that once included such gruesome customs as infanticide. Although the Ache no longer practice these activities, they retain many of their other traditions and beliefs.

One such custom revolves around the names Ache parents give their babies. They choose names from animals that hunters give the mother to cook during her pregnancy. Luisa's Ache name, Mbyvangui, means "essence of paca." Angel's Ache name, Tatunambia, means "spirit of one-eared armadillo." Luisa's sisters were named after a monkey, armadillo, and two types of birds. Her brother was named after a bat. "We caught the bat and cooked it," explains Angel, through an interpreter. "But grandfather ate it."

Although Luisa's lifestyle, background and language may be difficult for many Americans to understand, her reason for coming to Memphis was simple: Luisa had cancer, and St. Jude could offer her hope.

Journey to Memphis

While playing ball in the summer of 2000, Luisa injured her leg, and it began to swell. When antibiotics did not alleviate the problem, Angel took Luisa to a hospital in Asunción, Paraguay, for a biopsy. "That's where I saw Luisa and Angel," says John Wickman, MD, a family physician with the Memphis and Shelby County Health Department. He and fellow Memphian Edwin Taylor, MD, were in Paraguay on an annual medical mission trip to the Ache.

In the past, the Ache ignored members of their group who were ailing, because medical care was nonexistent. In fact, the Ache use one word, *mano*, to mean either "sick" or "dead." Infirm or dying individuals were taken into the woods and left behind, covered with palm leaves. But after the introduction of antibiotics and vaccines, the Ache began caring for their ill. Although local missionaries now help them obtain medical care, the Ache still face overwhelming obstacles that include racial discrimination and language barriers. "Your average Paraguayan who speaks Spanish does not speak Ache, and vice versa," explains Wickman. "It's not uncommon for an Ache to go to a hospital and since no one understands the lan-

guage, nothing gets done. The person may sit there literally for weeks."

When Luisa and Angel arrived in Asunción, hospital staff members gave them a list of items to purchase before Luisa could receive treatment. The needles, scalpels, bandages, sutures, scissors, gauze and drugs they bought were then used to perform the biopsy. The doctors determined that Luisa had rhabdomyosarcoma, a soft tissue tumor composed of cells that are similar to normal muscle cells. Wickman and Taylor knew that if Luisa remained in Puerto Barra she would most likely die. They approached Luisa's parents with a suggestion.

"In Memphis, we have the premier children's cancer hospital in the world," they said. "How about going up there?"

Lessons in humanity

Imagine flying to Mars and living there for a year. That scenario is no more outlandish than the situation in which Luisa and Angel found themselves when they arrived at St. Jude in November of 2000. Like many new patients, Luisa was fearful, but her anxiety was compounded by an inability to speak English or Spanish. Her

father speaks a smattering of Spanish, but no English. Items many patients take for granted were mysterious to Luisa. "Luisa was afraid to flush the toilet when she first got here," says St. Jude volunteer interpreter Hilda Rozier. "It was just one more thing that was new to her."

When Luisa arrived in Memphis, St. Jude staff members knew nothing of the Ache culture. That was not surprising—with only 1,000



After spending nearly a year at St. Jude, Luisa Mbyvangui is determined to emulate the career path of Sheri Spunt, MD. "You never know how Luisa's experience here might change her and her tribe," says Spunt. "It will be interesting to see what happens to her as she grows up, because she's certainly had an experience unlike anybody else in her tribe."

EDWIN TAYLOR, MD



In her Paraguayan village, a shy Luisa prepares to travel to St. Jude for treatment.

Ache in the world, few people know much about them. So Luisa's caregivers turned to Wickman for help. One afternoon last fall, doctors, social workers, nurse practitioners, dietitians and other employees crowded into a conference room to learn more about their patient and her lifestyle. They quickly discovered the answers to many of their questions. "The biggest problem we had was that Luisa was losing a substantial amount of weight," recalls Sheri Spunt, MD, of Hematology-Oncology. "It turns out that she wasn't eating because most of the foods here have salt or other spices. She was used to eating monkey, chicken or other meat right off the bone. We would bring her chicken fingers, but she wanted real meat. Once we learned about her home environment, it was a little bit easier for us to understand why she wouldn't eat and why she was afraid of certain things."

The cultural differences and challenges created a bond between the Ache family and St. Jude staff members. "It's amazing taking care of a child with rhabdomyosarcoma from a primitive culture," says Spunt. "At first, you think that these people are different from us. But then you realize that they get the same diseases and the same problems and that they cry about

the same things we cry about. It really is a lesson in humanity. We may not understand the words that each other speak, but we certainly can understand the emotions that we all have."

Communication was difficult, but Luisa was a quick learner. She began understanding some English words, adopting American fashions, even acquiring a taste for French fries. While undergoing these cultural adaptations, Luisa also had to endure a grueling 36 weeks of chemotherapy and the amputation of her right leg above the knee.

Luisa continually amazed St. Jude staff members with her sunny disposition and her lilting giggle. In spite of communication hurdles, Luisa became fast friends with nurses, van drivers, rehabilitation specialists and many other members of her patient care team. "She's won the hearts of everybody here," says Spunt. "She's always happy, always smiling. Luisa has adjusted to her amputation better than any other child I've ever taken care of." Spunt anticipates that Luisa will not face discrimination at home because of her amputation. "It won't be that unusual," says Spunt. "Other people in their community are missing limbs because of snake bites and all sorts of natural disasters."

EDWIN TAYLOR, MD

Home again

After spending nearly a year in the United States, Luisa has acquired a host of new habits, interests and experiences. She has learned to understand many English words and has mastered the

American card game "Uno." She has tasted snow. And she has mourned for America. "She loves the United States, so she's sad that something bad happened here," explained Angel, following the terrorist attacks on America in September.

Most importantly, Luisa has forged deep friendships that transcend language or culture. As she walks down a St. Jude corridor with her social worker, Judy Hicks, Luisa reaches up to hold the woman's hand. "I love Judy!" she says. Luisa has plastered Hicks' office walls with whimsical drawings that reflect the child's sunny personality and artistic talent. Luisa's father speaks for both of them when he says, "All of the people here are very kind and nice. They show lots of love to us."

By the time this magazine is printed, Luisa and Angel will have returned to their village. Angel says his wife is planning a massive homecoming celebration: "I have about 40 chickens and three geese in a chicken coop," he explains. "Luisa's mother is going to kill about 20 of those chickens for a big party."

At home, Angel will resume his position as chief of the community, a job that entails serving as intermediary between the Ache and the Paraguayan government, and keeping the peace among band members. Deforestation and land ownership are crucial issues to the Ache, whose hunting grounds are diminishing as civilization encroaches. "Land is the main problem," says Angel. "And electricity. We also do not have running water in our village." They do have a school, though, and Luisa looks forward to returning to her studies. "I like school," she says, with a grin.

John Wickman, MD, changes the dressing on Luisa's leg after her biopsy in the summer of 2000. Luisa's father, Angel Tatumambia (at right), is chief of the Ache community at Puerto Barra.



1



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In her little village school, Luisa will study hard. She has to, because of one more item she acquired in the United States—a career goal. "I'm going to be a doctor," Luisa promises. "And I'm going to work at St. Jude."

Many thanks go to Magdalena Hurtado, PhD, co-author of Ache Life History: The Ecology and Demography of a Foraging People and author of Anthropologist: Scientist of the People, for providing background information on the Ache for this article.●

1. During her treatment at St. Jude, Luisa missed her siblings (from left), Francisco Mbupigui, Karina Chanegui, Christina Puagui and Emma Tatugui.
2. The Ache harvest wild honey from beehives they build in the forest.
3. John Wickman, MD, provides medical care to an Ache woman while other patients wait their turn. A machete rests against the wall of the makeshift "waiting room."
4. In spite of its poverty, Puerto Barra is a beautiful place.
5. An Ache hunter takes aim at a monkey high in the forest canopy. In addition to monkey, the Ache also eat deer, armadillo, paca (wild boar), chicken and grubs.

PHOTOS THIS PAGE BY JOHN WICKMAN, MD, AND EDWIN TAYLOR, MD



STEM CELLS

Reasons for the Research

BY ELIZABETH JANE WALKER

Meet two of the world's best reasons for stem cell research—Cody Bigos (at left), and his buddy, Jacob Menzel.

There's a new celebrity in town. Like any famous star, this one is alternately praised and maligned in the popular press. Open a newspaper, flip on a television or peruse a magazine and you'll likely be inundated with news and views about this latest luminary—the mighty but microscopic stem cell. What is a stem cell? Why all the hubbub about a cell, and why should researchers from St. Jude Children's Research Hospital study it? Mary Jo Menzel knows exactly why stem cells are important—because these lowly cells may have the ability to transform her son's life.

An accomplished swimmer and enthusiastic soccer player, 7-year-old Jacob Menzel is gifted with a nimble mind and incisive analytical skills. He excels at mathematics, puzzles and

computer games. Like other boys his age, Jacob spends hours in imagi-

native play, adroitly fashioning Lego creations and pondering the nuances of Pokemon and Harry Potter. But this bright first-grader is far from typical. He is one of a handful of children on the planet to undergo stem cell infusions for

osteogenesis imperfecta (OI), a cruel genetic disorder also called "brittle bone disease."

Jacob's journey began October 20, 1994, when the obstetrician heard bones breaking as she pulled him from the womb. "In the first few years of his life, Jacob broke a bone, on average, every month," says his mother. OI affects the production of collagen in Jacob's body. In addition to frequent bone fractures, the disorder leads to excessive fragility, short stature and deformities, and in its severe form, death. Until recently, children like Jacob faced a grim future.

But in 1996, a glimmer of hope appeared when Ed Horwitz, MD, PhD, of the St. Jude Hematology-Oncology department performed the world's first bone marrow transplant for osteogenesis imperfecta. Since then, Horwitz's use of stem cells has made headlines as the public clamors for information about the controversial cells.

What are stem cells?

In the past couple of years, stem cells have generated great excitement among researchers, physicians, patients, the media and the general public. These rare and powerfully therapeutic cells are immature "master" cells that can renew themselves and develop into a variety of cell types. Most stem cells occur in the bone marrow, although they have been identified in other organs, as well. Marrow stem cells produce all of the body's oxygen-carrying red blood cells, infection-fighting white cells and the platelets necessary for clotting.

For many years, doctors at St. Jude have been performing bone marrow transplants. When the "sick" bone marrow is replaced with donor marrow, patients' bodies begin to produce new, healthy cells. Only in the past decade have scientists been able to isolate individual



JERE PAROBK

stem cells from the blood and bone marrow for use in transplants. Bone marrow contains stem cells, but it also contains other kinds of cells that may not benefit patients. As stem cell purification methods have become more accurate, the number of bone marrow transplants has declined, and the number of stem cell transplants has increased. At St. Jude, about 150 stem cell infusions are performed each year.

Stem cell use at St. Jude

Some scientists at other institutions have obtained stem cells from human embryos. This highly controversial source of cells has not been used at St. Jude. Stem cells used for transplantation at the hospital are harvested solely from the blood or bone marrow of children or adults.

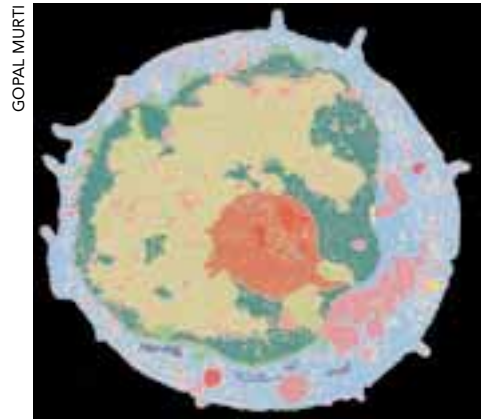
Malignant diseases treated with stem cell transplantation at St. Jude include leukemias, brain tumors, Hodgkin disease, non-Hodgkin lymphoma, neuroblastoma, Ewing sarcoma and other relapsed solid tumors. Non-malignant disorders include sickle cell disease, severe combined immunodeficiency syndrome, Fanconi anemia, Wiskott-Aldrich syndrome, thalassemia, aplastic anemia and metabolic storage disorders. Stem cell transplantation offers many patients their last and only chance for a cure. This treatment method is often used for children whose diseases have not responded well to conventional therapy or whose diseases have returned after therapy.

In some treatment plans, patients serve as their own stem cell donors. In these cases, stem cells are harvested from the patients. The children then undergo chemotherapy and perhaps radiation, which destroy the immune system along with any cancerous cells. When the previously stored stem cells are infused, they begin

producing new cells. Until the immune system fully recovers, the child is highly susceptible to infection.

An allogeneic transplant occurs when another individual donates stem cells for the patient. This process is extremely complex, because the patient's immune system is replaced by that of another person.

St. Jude clinicians attempt to find a donor whose tissue type, or human leucocyte antigen (HLA) type, matches the patient's. The closer the match, the lower the risk to the patient. If a patient has four siblings, the odds are that one of them would be a perfect match, possessing all six of the antigens



A stem cell is an immature "master" cell that can renew itself and develop into a variety of cell types.

necessary for successful engraftment. If the patient does not have an HLA-identical sibling, then St. Jude staff members search for a matched unrelated donor. Because of recent scientific advances, some parents may now be considered as donors, even though they match only three of the six antigens. In an allogeneic transplant, clinicians must ensure that the patient's immune system does not perceive the donor's stem cells as foreign and destroy them. Another serious complication is graft-versus-host disease. If the donor's stem cells are not purged of infection-fighting T-cells before the transplant, those

cells will mount an attack against the patient or the host.

Parental donors

In St. Jude laboratories, researchers and clinicians are working feverishly to harness the power of stem cells. One St. Jude project has the potential to revolutionize transplantation of these cells. About half of the children who need transplants do not have matched sibling or unrelated donors. That number is much higher for ethnic minorities, who are underrepresented in the marrow registry. Until recently, those children had no chance for a cure. But in January of 2000, a team led by Rupert Handgretinger, MD, director of Stem Cell Transplantation at St. Jude, began transplanting stem cells from some parental donors. A protocol, or scientific treatment plan, for this procedure is in development, pending approval by the Food and Drug Administration. Evaluating each patient's need on a case-by-case basis, the FDA has already granted permission for St. Jude clinicians to perform several of these transplants. "In cooperation with the FDA, we have been able to treat patients who cannot wait for treatment until we have the protocol approved," explains Handgretinger. "One of these transplant patients is a 15-year-old with leukemia. She is doing well. She would not be alive now if she had not had the transplant."

Because a parent only shares half of the antigens necessary for a child's transplant, Handgretinger and his staff must take extraordinary measures to prepare both patient and donor cells for transplantation. By using a new procedure called magnetic activated cell sorting, St. Jude staff can magnetize and isolate donor stem cells, reducing the chance that donor T-cells will attack the patient, or host, and cause graft-versus-host

Some scientists at other institutions have obtained stem cells from human embryos. This highly controversial source of cells has not been used at St. Jude.

disease. "We developed a method whereby we can process billions and billions of cells and pick out only the stem cells, leaving the rest behind," says Handgretinger. Staff members closely monitor chemotherapy and/or radiotherapy usage to eradicate cancer cells with the fewest possible side effects. Handgretinger is excited that St. Jude staff may soon be able to

use parental donors on a regular basis for stem cell transplantation. "You'll never find a more motivated donor than the mom or dad of the patient," he says. "And you have the donor sitting at the patient bedside every day. If you need a second transplantation, you don't have to do a donor search, because it's easy to find that donor."

Handgretinger and his colleagues are continually conducting research to better understand the biology of stem cell transplantation, to improve the processes and to make the procedures safer. "We can never stop doing this kind of research until we improve the survival rates to 100 percent," Handgretinger asserts.

Another St. Jude "first"

In another St. Jude laboratory, researchers led by Brian Sorrentino, MD, director of Experimental Hematology, have discovered what they believe to be the world's first "universal" stem cell marker. The team found that expression of a gene called *ABCG2/Bcrp1* allows scientists to identify stem cells from a variety of sources. The gene pro-

EVANNE NEWMAN



About half of the children who need stem cell transplants do not have matched donors. Rupert Handgretinger, MD, director of Stem Cell Transplantation at St. Jude, has developed a method for transplanting stem cells from parental donors. "We can never stop doing this kind of research until we improve the survival rates to 100 percent," says Handgretinger, pictured here with St. Jude patient Destiny Moore.

vides scientists with a much more accurate way of identifying true stem cells than has been available in the past. Stem cells in the bone marrow, skeletal muscle and the early mouse embryo expressed the *ABCG2/Bcrp1* gene in a highly specific manner; most mature cells showed no expression, underscoring the gene's potential use as a stem cell marker.

Scientists have long been seeking a good way to identify stem cells. In a sample of 100,000 bone marrow cells, only a few may be stem cells. Scientists have been using several methods to identify the cells, including a common stem cell marker called CD34, but most cells identified with this method are not true stem cells. "People have looked at a variety of other markers. Nobody has ever found an absolutely specific stem cell marker," says Sorrentino. "Our work suggests that *ABCG2/Bcrp1* could be that type of marker."

Expression of the *ABCG2/Bcrp1* gene may also ensure that stem cells remain in a primitive state—that they do not differentiate into red blood cells, white blood cells or other kinds of cells. This discovery might help scientists control stem cell differentiation. The St. Jude research involved laboratory animal stem cells. Sorrentino and his team are currently working on a way to use the marker to identify stem cells from human bone marrow. The scientists are also involved in research that will allow stem cells to be used as gene therapy vehicles. Some diseases are caused by defective genes. If a stem cell containing a normal copy of a gene is put into a patient, that cell could theoretically produce billions of normal cells for the rest of the patient's life.

A childhood cancer survivor himself, Sorrentino says he always knew he wanted to become a physician-scientist. A battle with

Hodgkin disease at the age of 17 cemented that goal. Sorrentino's work with stem cells may help untold thousands of children with immune system disorders, genetic diseases, Hodgkin disease and other kinds of cancer. "St. Jude is a great environment for doing research and working on blood," says Sorrentino, who came to Memphis from the National Institutes of Health in 1993. "We've got the world's leading experts in blood here. I've heard it said that the only thing that will limit you at St. Jude is your ideas, and that's the way I feel. It's a great place to do science and to do medicine."

New life for brittle bones

Cody Bigos' mother, Beth, says that St. Jude is also a great place to come for a healthy dose of hope. In

May of 1997, Beth carried her tiny son into St. Jude on a pillow, taking exquisite care lest she break his fragile bones. That summer, Cody received the world's fourth bone marrow transplant for osteogenesis imperfecta, only a few hours after Jacob Menzel underwent his transplant. During these procedures, Horwitz infused the boys with whole bone marrow, which contains mesenchymal stem cells that are capable of making bone and connective tissue. Sure enough, the boys' bones began to grow.

A year earlier, Horwitz had performed the world's first stem cell transplant for osteogenesis imperfecta. The mesenchymal stem cells had engrafted and differentiated into bone cells. The cells actually altered the structure of the bone and helped the bones grow more normally, but eventually the growth

began to slow down. Horwitz then established a new protocol, in which mesenchymal stem cells were removed from donor bone marrow and infused into patients. Again, the cells began to produce new, healthy bone cells, which strengthened the bones and made them grow. Jacob and Cody each received stem cell infusions during this study.

"The stem cell infusions most definitely helped," says Mary Jo Menzel. "The science just makes sense: you introduce cells into somebody's body, and the body accepts those cells."

Beth saw a startling difference in her son after the stem cell infusion. "Within a week after receiving stem cells, Cody started crawling," she says. "It was the most

"I gave birth to Cody, but St. Jude really gave him a life. And he lives every day to the fullest."

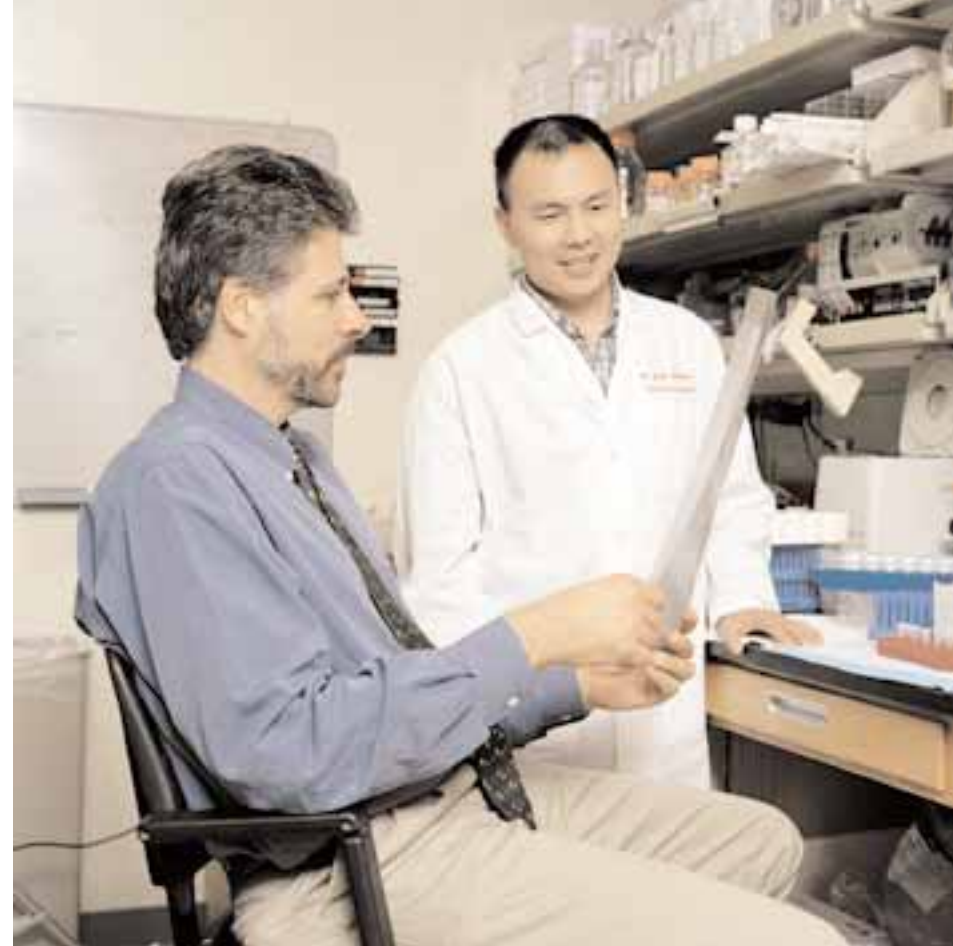
amazing thing I've ever seen in my whole life." But eventually the benefits again began to taper. Soon, Horwitz, Jacob and Cody will embark on a third stem cell protocol aimed at further reducing the effects of the disease.

"We'd love to be able to give them one treatment and have them cured," says Horwitz. "But we're not there yet. Rarely in medicine do you hit a home run. Most advances are made in incremental fashion, a little bit at a time. Think

about leukemia. Until 1948, the cure rate was zero. By 1962, it was 4 percent. By 2001, it's up to about 80 percent. But that didn't happen in a year. It happened in 40 years. In the past five years, we've had extremely positive outcomes. We've proven that this can work, it's safe, and it seems to be beneficial. We're going to build on that."

While Horwitz works on ways to help Jacob and Cody, the boys concentrate on making friends, attending classes and pursuing busy social lives. A student at Woodside Elementary School in Sussex, Wisconsin, Jacob enjoys a popularity that astounds his mother. "I'm famous at school," he says, matter-of-factly, when strangers recognize and greet him in public places. His friend, Cody, is just as outgoing. "He knows everybody in town," says his mother. "I'm pretty positive that he's going to grow up to be mayor of Forked River [New Jersey]." Although the two boys still use wheelchairs, they make the most of it. Jacob plays wheelchair soccer and Cody—thanks to instruction from Jacob—has learned to pop a wheelie in his wheelchair, to the exasperation and amusement of his mother.

Beth knows that these boyish antics are possible because of the stem cell therapy her son has received at St. Jude. "I gave birth to Cody," says Beth. "But St. Jude really gave him a life. And he lives every day to the fullest."•



Experimental Hematology Director Brian Sorrentino, MD, discusses a research project with Sheng Zhou, PhD. These St. Jude researchers were members of a team that discovered what may be the world's first "universal" stem cell marker. The research, published in the September 2001 issue of *Nature Medicine*, may provide scientists with a much more accurate way of identifying true stem cells than has been available in the past.



In 1996, Ed Horwitz, MD, PhD, of the St. Jude Hematology-Oncology department performed the world's first bone marrow transplant for osteogenesis imperfecta. Since then, his innovative use of mesenchymal stem cells has given hope to patients like 4-year-old Morgan Thomas.

GOING, GOING, GONE!

BY ELIZABETH JANE WALKER

The National Auctioneers Association has given more than \$2 million for the children of St. Jude. And once a year, the NAA lets kids at the hospital participate in an action-packed auction of their very own.

This is no ordinary Monday morning in the cafeteria at St. Jude Children's Research Hospital. Absent are the clink of silverware and the scrape of chairs on linoleum. Instead, the room resounds with an undulating chant that rises and falls like



Four-year-old Alec Inglett perches on his dad's lap to bid for the perfect toy.

ocean waves. Children bounce and bob like buoys on the sea, popping out of their chairs to wave white placards. But this is more than child's play. It's an auc-

tion where savvy bidders plot their strategy with a seriousness that belies their years.

"I'm not going to bid on just anything," says an 8-year-old auction-goer, as she nervously counts her cash for the third time. "I'm going to wait for a certain watch." She runs to a table piled high with toys and points out a colorful timepiece. "That is the one I really, really want."

This is the sixth year that the National Auctioneers Association (NAA) has held a toy auction at St. Jude. Each pint-sized participant receives \$30 in "play money" and a card emblazoned with a bid number. Tables are piled with treasures ranging from race cars and jewelry boxes to cell phones, collectible dolls and baseball cards. At precisely 10:15 a.m., two world-champion auctioneers take the podium. JillMarie Wiles begins auctioning off the first item—a princess dress-up set. As the words spill forth in a melodious, high speed chant, the children gawk in amazement, their excitement building apace. "How can she talk that fast?" marvels one youngster. Within seconds the



Molly Burns, a St. Jude patient since October of 2000, holds a videotape she obtained during the auction. With her \$30 in play money, Molly also purchased an electronic cash register and plastic food.

children have overcome their awe and have jumped into the fray, bidding feverishly as spotters cry "Yep" and point to bidders. There

are no subtle bids here—no nods or imperceptible movements. Some bidders leap in front of the podium, holding their numbers high, waving their hands frantically, as they vie for toys. "Sold!" proclaims Wiles, as a patient hands over \$5 in play money to claim the first purchase of the day. For the next hour, Wiles and her colleague, Scott Musser, conduct a rollicking auction while ensuring that each child "purchases" at least one item.

Wiles and Musser have come to Memphis as part of their duties as the 2001 International Auctioneer Competition champions. As title winners, the two auctioneers traverse the country on behalf of the National Auctioneers Association and its charity, St. Jude Children's Research Hospital. The NAA has raised more than \$2 million for St. Jude, but Musser hopes the organization can increase that

amount exponentially. "We are encouraging each of our 6,000 members to raise money for St. Jude," says Musser, who hails from Kennewick, Washington, and comes from a family of auctioneers. "It shows how powerful a group can be if you do something together." Musser and Wiles, a self-avowed champion of children from Canby, Oregon, each received a \$10,000 prize package when they won the International Auctioneer Competition. "Touring the hospital and doing the toy auction is part of our responsibilities," says Wiles. "But after today, I really believe it's a part of the prize package."

In 1995, Memphis auctioneer and past NAA president John Roebuck played a vital role in convincing the National Auctioneers Association to support St. Jude. Roebuck presided over his first St. Jude fund-raising auction in 1962, and has been an

Auctioneer JillMarie Wiles celebrates a successful bid with St. Jude patient Tony Davis.





The action is hot and heavy as Scott Musser recognizes a young bidder. Musser and JillMarie Wiles conducted the high-energy event as part of their official duties as the 2001 International Auctioneer Competition champions.

ardent supporter ever since. For the past six years, Roebuck and his wife have helped the NAA meet its philanthropic goals by hosting local golf tournaments that have netted about \$30,000 a year for the hospital. "We've got the capability of raising many, many more millions for St. Jude," says Roebuck. Joe Wilson, current president of the organization, expands on that statement. "We made a \$5 million commitment just recently as an association, and we're not going to stop there. I hope we can raise \$10 million, \$20 million, \$100 million in the future."

Money raised by the NAA and other organizations around the country helps St. Jude researchers and clinicians increase the cure rates for many diseases. But today the children at the NAA auction are not concentrating on cure rates or scientific discoveries. They are focused on the toys. Five-year-old Ryan Trahan of Louisiana holds his bidding num-

ber on top of his head, in a ploy that earns him a truck and car combo. Delaney Barnes, age 4, successfully bids on a truck and a set of interlocking building blocks. "He got exactly what he wanted," says his mother, Teresa Barnes. Seven-year-old Molly Burns of West Tennessee arrived at the auction early to obtain a front-row seat for

the proceedings. As she exits the cafeteria for her chemotherapy treatment, Molly carries the electronic cash register she had eyed earlier in the day.

St. Jude patient LaToya Harp, 10, of Mississippi is attending her first auction. Her disease in remission, LaToya has returned to the hospital for a checkup and is attending the auction between appointments. With a shy smile, LaToya displays the commemora-

tive baseball jersey she purchased. "I got this for my brother," she says. A videotape LaToya obtained at the auction will also be given to a sibling. "She's always been selfless," says her father, Roy Harp, who is quick to express his gratitude to the hospital and to the donors who saved his daughter's life. "The people who donated and did this are just wonderful," he says, gazing around the room. "The first day we came to St. Jude, it seemed like LaToya's whole life was gone, but the doctors and nurses brought her through it. She's doing really good now. I never dreamed of a place like this before we came here. But it has been a blessing to me, and I thank God for it."

Tonight, LaToya will return home to her other family members and distribute the gifts she "purchased" at the auction. But the NAA's 6,000 members have given LaToya something far more precious than toys. Thanks to the auctioneers' selflessness and support, LaToya and thousands of other children like her have been given the gift of hope.●



Serious bidding is the order of the day for (from left) St. Jude patient Taylor McCain of Louisiana and her mother, Rachel; Jessica Gonzales-Vargas, sibling of patient Jose Gonzales-Vargas; and 4-year-old patient Nicholas Sanchez of Chile.

The Comforts of HOME

THANKS TO THE ST. JUDE DOMICILIARY CARE DEPARTMENT, FAMILIES CAN CONCENTRATE ON THE HEALING PROCESS INSTEAD OF WORRYING ABOUT THE COSTS OF TRANSPORTATION, LODGING OR FOOD.

BY MICHAEL CODY

It's a time when logistics and money are the last things on a parent's mind.

"You just go. You don't think about money," says Sheila Chavis of the trip that brought her and her son, Reggie, to Memphis for treatment. "Our pediatrician said that St. Jude would accept our son, that we would be flown to Memphis and asked if we could leave that afternoon."

The Chavises live in Louisiana. When the doctor told Sheila that her son had Ewing sarcoma, he mentioned St. Jude Children's Research Hospital in the same breath. "Just hours later, there we were in Memphis, and a car was waiting for us at the airport," Sheila says. "We were in a daze."



Eleven-year-old Britton Roberts washes his dishes after eating lunch at the Ronald McDonald House. "It's awesome here," says his mother, Leisa Burke, of their latest stint at Ronald McDonald House. "It's like being on vacation while having all the amenities of home at the same time. Britton actually looks forward to coming to Memphis and playing in the game room with his friends. It's just like a home here."

PHOTOS BY SETH DIXON

Getting there

Cathy Hall of the St. Jude Travel Office says airfare is just the beginning of the assistance St. Jude provides to patients and their families. St. Jude will pay all the costs of transportation, housing and meals for the patient and one parent. The journey begins with the child's diagnosis.

Travel arrangements depend on patients' medical conditions. Sometimes, patients can spare a few days to drive. St. Jude pays 16 cents per mile for those journeys. When time is of the essence, the Travel Office books air travel. The accepting physician at St. Jude calls the Travel Office and sets the criteria. "We have contracted rates with Northwest and Delta Airlines," Hall explains. "They offer St. Jude really good rates that



Thanks to a weekly \$80 grocery store certificate, patients like Georgina Badis and her mom, Lody Francis-Badis, can buy and prepare the foods that they enjoy. Georgina, from Syria, loads groceries onto the Target House van, which provides regular transportation from Target House to the hospital, bank, grocery and drug store. If they prefer, patients can opt for cafeteria vouchers instead of grocery store certificates; these vouchers can be used at some Memphis-area restaurants in addition to the hospital cafeteria. "We are really thankful for everything that St. Jude has done for us," says Lody, who has lived with her daughter at Target House for a year-and-a-half. "You can't find this kind of treatment anywhere else."

help keep our costs down." Of course, St. Jude treats patients from 60 different countries. "Once these patients are doing well, we send them home and fly them back twice a year for check ups," Hall says.

More than a bed

St. Jude patients are welcomed into a new community of healing. When the parent and child arrive, they are assigned to short- or long-term housing based on the patients' medical needs and the length of time they are expected

to be in Memphis.

Target House is an extended-stay facility located in the middle of St. Peter Village, a Catholic Diocese complex (see related story, page 24). Target Stores and their vendors donated to ALSAC all the funds necessary to build the facility, and Target was heavily involved in its construction. Target House offers 48 two-bedroom apartments plus two apartments for immunosuppressed patients. St. Jude recently broke ground for "Target House II," an expansion that will offer 46 more apartments and many family and large-gathering areas. Target

House II is set for completion in November 2002.

The 51-room Ronald McDonald House is a shorter-term stay facility operated by the Ronald McDonald House board and St. Jude. The facility in Memphis is one of only a few in the nation dedicated to a single medical institution. St. Jude also has a standing contract with the Marriott Downtown Hotel, located within two blocks of the hospital.

St. Jude provides ground transportation for patients who were whisked to Memphis by air. Two shuttles run throughout the day

and into the evening: one rotates among the Marriott Downtown Hotel, the hospital and the Ronald McDonald House; the other connects Target House families to the hospital. At scheduled times, a van also takes Target House families to the grocery, bank or drug store.

Of burgers and pizza

The Ronald McDonald House has kitchen facilities that are shared by the families staying there. The facility has rooms stocked with basic food items provided by the community. "Parents who are using the kitchen just go in and get what they need," says Brent Adams, St. Jude Domiciliary Care director. "Plus, St. Jude provides each family with an \$80 Kroger grocery store certificate each week."

Target House has a kitchen in each apartment. St. Jude provides Target House families with \$100 Kroger certificates each week.

Target House families often participate in an open door night, where they leave their doors open and walk from room to room sampling each other's cooking. "It gets really interesting," Adams says.

Of course, families can also eat in the St. Jude cafeteria. Out-patient families may choose to receive either grocery store certificates or cafeteria vouchers, which can also be used at some Memphis-area restaurants. If they opt for the vouchers, the patient and a parent each receive a meal ticket for breakfast, lunch and dinner. The parent of an inpatient also receives three cafeteria vouchers per day. Nutritionists at St. Jude work with staff members in Domiciliary Care to ensure that patients have the best possible nutrition. For example, Ruth Williams, RN, EdD, director of Clinical Nutrition Services, has a protocol where participating parents may eat in the hospital room with the patients. Williams is evaluating whether or not

patients eat more food when their meals are shared rather than eaten alone.

Today, Danita Ealy from Louisiana enjoys lunch in the cafeteria while helping her active son, Jabari, clobber his sandwich—a process that seems to include just about everything but taking a bite. When they first arrived in Memphis and were staying in a hotel, the Ealys received meal tickets for the cafeteria. Occasionally, they ordered room service, a cost covered by St. Jude. Now the Ealys live at Ronald McDonald House, where they receive a grocery store gift certificate each week. Today, they've used some of their own money to buy a quick cafeteria snack. "It's very reasonable," Danita says of the cafeteria fare.

Looking forward

Domiciliary care is an integral part of the St. Jude healing process. Recently St. Jude began consolidating its patient housing. The ALSAC/St. Jude Boards of Directors and Governors are planning a short-term stay facility to be built on the St. Jude campus. This facility will reduce the number of patients who have to stay in area hotels when both the Ronald McDonald House and Target House are filled.

"As we all know, when a child has cancer or another catastrophic disease, the whole family suffers," Adams says. "The ALSAC/St. Jude Boards set their sights on treating the entire family. Board members know how important it is for the entire family to know that the child and a parent or caregiver are taken care of. Nobody is ever turned away from St. Jude because they can't afford housing, transportation or food."●



Habib Affara, 13, of Lebanon, plays an electronic game in his bedroom at Target House, where he will live for the next year during his treatment at St. Jude. Habib's older brother, Adham, says the support system among families at Target House has helped the brothers cope with the stress of treatment and adjust to a new language and culture. "All the families at Target House know one another and talk to each other," says Adham. "They share everything with each other."

Perspective

The Catholic Diocese of Memphis and St. Jude embark on another project to help children.

By Bishop J. Terry Steib

In 1996 Dick Hackett, then senior vice president of ALSAC, approached me about developing a working relationship between the Catholic Diocese of Memphis and St. Jude. This relationship would culminate in housing for St. Jude patients and their parents. The facility would be known as Target



Bishop J. Terry Steib

House and would be built on the grounds of St. Peter Village (see related story, page 21).

St. Peter Village involves five institutions: St. Peter Home for Children, Memphis Catholic High School, St. Peter Daycare, St. Peter Manor Retirement facility and

St. Peter Villa Rehabilitation and Nursing Center. The addition of the new housing facility certainly continues the central mission of St. Peter Village, envisioned by Bishop Carroll T. Dozier, the first bishop of the Diocese of Memphis. Bishop Dozier had envisioned a “village” where the Catholic Church could minister to the physical, social and spiritual needs of children and others in need.

To me, this proposal would be the perfect marriage of two parties—each, whose mission is to serve others regardless of religion, ethnicity or financial means. St. Jude’s unwavering commitment to treating children who are stricken with cancer and other catastrophic illnesses sets a standard of excellence in the field of medical research that is second to none. The spirit of generosity, charity and caring that infuses the dedicated men and women of this facility is especially worthy of recognition. Every day, the doctors at St. Jude strive to find cures to save and improve the quality of life for children all over the world.

The Catholic Diocese of Memphis began its partnership with St. Jude in 1997. The first Target House opened in the spring of 1999. This facility, which can

accommodate 50 patients and their families, provides the feeling of home for long-term patients suffering from cancer and catastrophic illnesses. We are pleased to have Target House on the grounds of St. Peter Village. It is a testament to the strength and longevity of Bishop Dozier’s vision.

The Catholic Diocese of Memphis and St. Jude share a common bond, which helps to solidify our partnership. Each of us is committed to uplifting the dignity of the person with compassion, caring and love. I anxiously await the opening of the second Target House in the fall of 2002, which will further strengthen our partnership with St. Jude, as well as our shared commitment to serve others. With great anticipation, I look toward the future with its many blessings and miracles from a good and gracious God.

Bishop J. Terry Steib, SVD, was installed as the fourth bishop of Memphis in 1993. Ordained to the priesthood in 1967, he has served the Catholic Church in many positions, including as auxiliary bishop for the Archdiocese of St. Louis, Missouri.●

The Catholic Diocese of Memphis and St. Jude share a common bond, which helps to solidify our partnership.

LAURA HAJAR



Home, Sweet Home

What a “groundbaking” event it was! On November 15, 2001, Santa Claus arrived at Memphis’ Wolfchase Galleria to christen the world’s largest gingerbread house—a 5½-story edifice built to benefit St. Jude Children’s Research Hospital. During the holiday season, gingerbread donation packages ranging from \$25 to \$100 were sold to raise funds for St. Jude. Among the many patients and parents attending the grand opening of the Kroger St. Jude World Record Gingerbread House were Blair Mills (top), who participated in the ribbon-cutting ceremony and supervised the icing of one gingerbread “brick,” and Aldo Zuniga, who spent some quality time with St. Nick.

Standing more than 57 feet tall, the house was constructed of 3,000 sheets of gingerbread (each weighing four pounds), 4,500 pounds of icing, 3,600 pounds of chocolate, and hundreds of pounds of peanut brittle, candy and popcorn. Built by Roger Pelcher of Lakeland, Tennessee, the structure will be listed in the Guinness Book of World Records.