

 STEELE MEMORIAL  
**CHILDREN'S**  
RESEARCH CENTER  
The University of Arizona  
Health Sciences Center  
Department of Pediatrics  
PO Box 245073  
Tucson, AZ 85724-5073

# Steele Memorial Children's Research Center

A "MUST READ" FOR EVERY GROWN-UP WHO CARES ABOUT KIDS

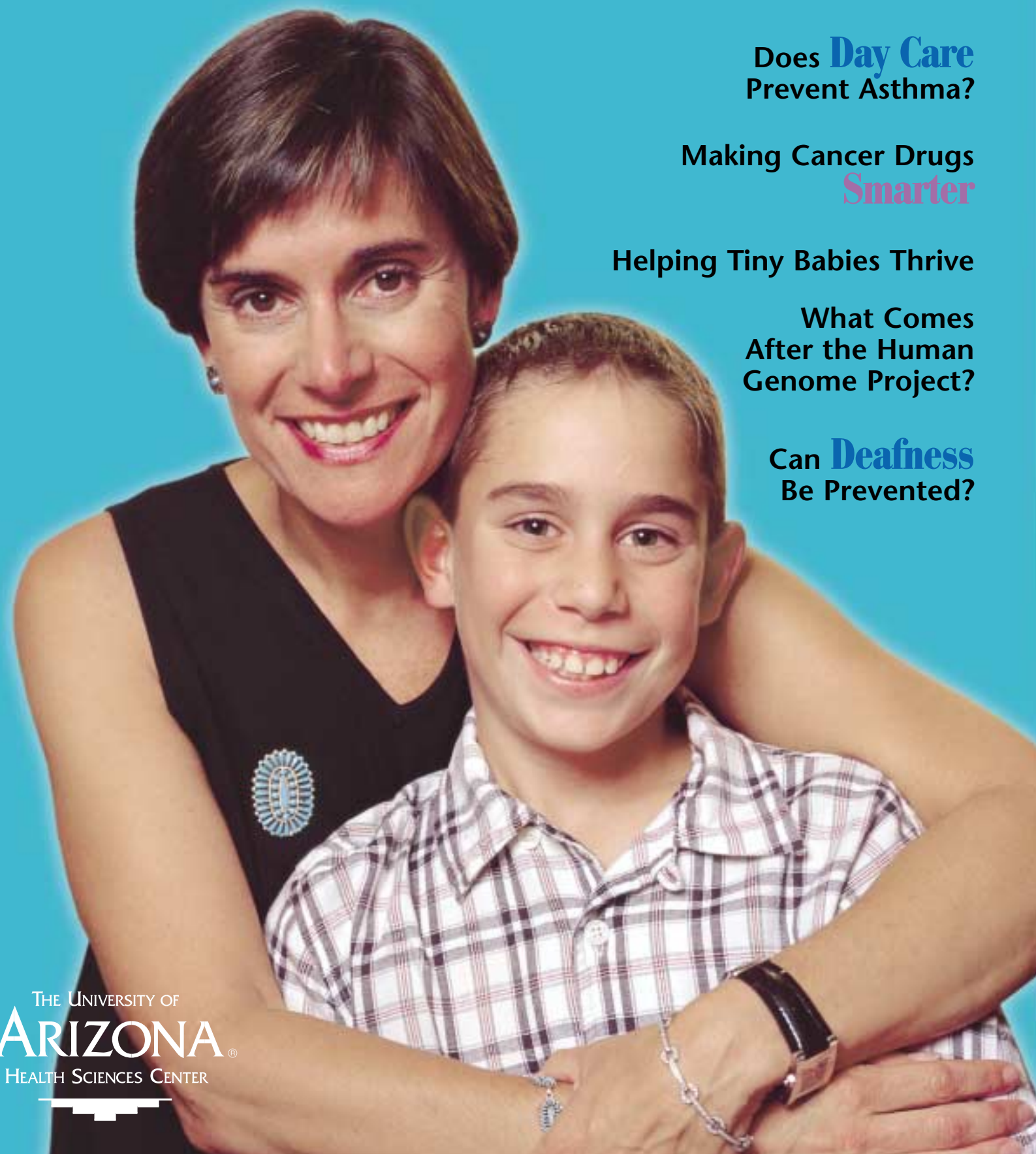
Does **Day Care**  
Prevent Asthma?

Making Cancer Drugs  
**Smarter**

Helping Tiny Babies Thrive

What Comes  
After the Human  
Genome Project?

Can **Deafness**  
Be Prevented?



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## STEELE MEMORIAL CHILDREN'S RESEARCH CENTER

The Steele Memorial Children's Research Center is a place where internationally recognized researchers work together to solve the medical problems that plague our children. The faculty members here play a unique role in the community – as physicians, researchers and teachers. The Steele Memorial Children's Research Center, dedicated in 1992, was built with private funds to advance the health concerns of children. The Center was named in honor of the late Horace W. Steele of Phoenix. The Steele Foundation donated \$2 million to help build the Children's Research Center.

# Message

FROM FAYEZ K. GHISHAN, M.D.  
Director of the Steele Memorial Children's Research Center

This is the most exciting time to be involved in medical research. The rapid advances in science and medicine during the last decade will pale in comparison to the explosion of new knowledge to come.

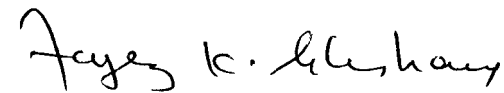
You've probably read that scientists around the world have completed a detailed map of every bit of human DNA. But now the real work begins. Since the sequence has been established, mapping the location of each gene is next. Some of that work is happening here at the Children's Research Center. Soon we will know the location of the 100,000 or so genes in our bodies and, more importantly, what diseases we may be at risk for because of genetic makeup.

But the best is yet to come. Identifying genes is the just the first step. Learning the function of the genes is the next and most crucial step to better medicine. It's called "post-genomic biology" and you'll be hearing more about it. All genes express proteins, which are the "work-horses" of the gene. Understanding the function of the proteins is the key to being able to translate genetic information into new treatments for human disease.

With outside support from scientific and philanthropic foundations we have been able to buy the tools that will enable us to make this important transition. The confocal microscope, purchased with a grant from the W.M. Keck Foundation, allows us to visualize proteins within a cell in incredibly fine detail. The microarray facility we are just acquiring with support from the Diamond Foundation, provides the technology we need to study the expression of thousands of genes at once, to determine the differences between normal and diseased tissue. Our ability to make incredible advances is taking a giant leap forward.

As this report goes to press, we also are discussing another major advance for the health care of children – a Tucson Children's Hospital. There is no question that consolidating pediatric services in Tucson would provide a higher quality of care for kids. It is a complicated issue, no doubt. But with so many pediatricians, hospital administrators, parents and community leaders working together, I am convinced that this community will do the right thing for the children. As with everything we do at the Children's Research Center, the focus must be on what's best for kids.

I am continually gratified by the growing numbers of supporters of the Children's Research Center. I give thanks every day for the kindness and generosity of this community and for my own children's good health. Best wishes for a healthy 2001!



Faye K. Ghishan, M.D.  
Director  
Steele Memorial Children's Research Center  
  
Professor and Head  
UA Department of Pediatrics





# Day Care

## CAN HELP PREVENT ASTHMA

Children who spent time in day care during their first year of life, or have older siblings, are protected from asthma. This research by Tom Ball, M.D., MPH, UA Assistant Professor of Clinical Pediatrics, and Anne Wright, Ph.D., Research Professor of Pediatrics, was published this summer in the *New England Journal of Medicine*.

This finding may run counter to our current thinking, which is to try to create an antiseptic environment for our children. But it's the latest in a string of studies that show a little dirt and a few germs are good for us.

"It's all part of the 'hygiene hypothesis,'" Dr. Ball says, "and may begin to explain the near epidemic increase in childhood asthma, particularly in industrialized countries."

The theory is that for the immune system to develop into a healthy one, it needs some practice early in life. Exposure to viruses by virtue of being around other children allows the immune system to become stronger and less allergic.

This finding is based on a 20-year research project of the Arizona Respiratory Sciences Center, where its researchers have followed 1,000 infants since birth. Over time researchers have collected information on the children's health and their environment, which allows them to study the relationship between the two. Dr. Wright has been guiding the project since its inception.

"This incredible collection of information gives us great opportunities to learn exactly what factors influence whether a child will grow up to have allergies or asthma," Dr. Wright says.

Specifically, the researchers learned that children who were in day care the first six months of life, or have older siblings, were about half as likely to develop asthma as children who were not in day care and had no older siblings.

"Parents with strong family histories of allergies and asthma may want to ensure that their children are exposed to other children early in life," Dr. Ball says.

Dr. Ball explains that the exposure to other children doesn't necessarily need to take place in a day care setting. But exposure to other children early in life is a good thing – for many reasons.

"This is not a recommendation for day care or for larger families," Dr. Ball says. "But for those parents feeling guilty about the cold their child caught in day care, this study may provide some peace of mind."



Aaron Goetz, 9, demonstrating the use of an inhaler.

# A Boost

## TO BABIES HEALTH

Erythropoietin (Epo for short) is not something most of us spend much time thinking about. But it's a very important hormone that stimulates red blood cell production. The lack of it causes major problems for premature babies and children recovering from kidney transplants. Fortunately, Pam Kling, M.D., UA Associate Professor of Pediatrics, spends all her research time trying to better understand this special hormone.

Dr. Kling is a neonatologist. She cares for tiny, premature and critically ill newborns. Some of her patients weigh less than 2 pounds. Premature babies have very little blood (sometimes less than 4 ounces) and they lack the ability to produce new red blood cells. Premature babies have low levels of Epo, which means they can become anemic and require blood transfusions.

One of her projects is funded by the National Institutes of Health to better understand the role of Epo in breast milk. Along with her colleagues, Dr. Kling has learned that this hormone is present in very high concentrations in human milk and in the milk of other mammals. It is absorbed intact and reaches vital organs, including the bone marrow. However, the Epo in breast milk does not prevent anemia.

"This is a curious but important finding," Dr. Kling says. "It tells us that simply adding Epo to the formula we feed premature babies might not work. We have a theory that there are some important interactions with iron in the babies' systems, but that will require more study."

Another research project involves anemia in children who have undergone kidney transplant. Some Epo is produced in the kidney. Logic would tell us that when a child receives a new kidney, it should create Epo in normal amounts.

"But that's not so," Dr. Kling says. "We believe that a side effect of the immunosuppressive drugs is the suppression of Epo production." Post-transplant children become anemic, which affects their quality of life and retards their growth. "We are trying to understand the biological basis of the problem. Eventually we may be able to alter the immunosuppressive drugs so that the Epo production remains intact."

Dr. Kling's research also is funded by the Arizona Elks.

## Epo in the Olympics

Just in time for the Sydney games, the International Olympic Committee approved tests to screen for synthetic Epo. In addition to improving the health of premature babies, Epo can be used as a performance-enhancing drug.

Synthetic Epo (like the natural hormone produced by our bodies) increases the number of red blood cells, which carry oxygen to the muscles. Experts say it can improve performance as much as 15 percent. Epo is considered a banned substance.

Epo was the center of controversy during the 1998 Tour de France. Olympic officials are concerned that athletes involved in endurance events such as long-distance running, swimming and cycling may rely on Epo to boost their performance.

Until now, synthetic Epo could not be detected because our bodies naturally produce Epo. But six runners and seven rowers were eliminated from the Sydney games because they failed blood tests for Epo.

"As a sports fan and cycling enthusiast, I think it's unfortunate that any athlete would resort to illegal drugs," Dr. Kling says. "But as a physician, I just wish Epo would work as well with our premature babies as it seems to with Olympic athletes."



Naznin Dixit, M.D.  
pediatric endocrinologist

# Diabetes

## MORE KNOWLEDGE MEANS BETTER CARE FOR KIDS

There are good reasons that diabetes is being studied at the Children’s Research Center. One of the most common, chronic diseases of childhood, the incidence of the disease is high and rapidly rising in Arizona. In certain populations within our state, the incidence is more than twice the national average.

Naznin Dixit, M.D., Assistant Professor of Clinical Pediatrics in Endocrinology, recently joined the Children’s Research Center and is beginning several research projects related to children and diabetes.

Most children who develop diabetes are diagnosed with juvenile diabetes (Type 1 diabetes). However, within the last decade, an alarming increase has occurred in the number of children and adolescents with Type 2 (adult onset diabetes). Physicians and researchers believe this epidemic may be due to a variety of factors – genetic, metabolic, environmental — and complicated by obesity, low birth weight and malnutrition.

“Type 2 diabetes can develop slowly and a patient may not know for years that the disease is developing,” Dr. Dixit says. “Then by the time it is diagnosed it can be in an advanced stage.”

A recent study suggests that Type 2 diabetes is more prevalent among Mexican-Americans than Caucasians and is increasing at a significant rate, particularly among children. Dr. Dixit is beginning her own research in Douglas, Ariz., to determine the prevalence of Type 2 diabetes among Mexican-American adolescents. Working with Douglas High School, whose population is 92 percent Hispanic, Dr. Dixit and her team will screen all 1,300 students.

Those students whose glucose levels are suspicious for diabetes will receive further testing. Teens who are diagnosed with

Type 2 diabetes will be referred to a pediatric endocrinologist for disease management. Teens with risk factors for diabetes (obesity, family history) will be given medical counseling.

“It’s important to determine if there truly is a trend toward Type 2 diabetes among Mexican-American youths,” Dr. Dixit says. “If that’s so, we can develop health-promotion programs to incorporate into the school curriculum and reduce risk factors. We also will share this information with pediatricians to increase their awareness of Type 2 diabetes among children. Type 2 diabetes can be prevented.”

Another group of patients getting Dr. Dixit’s attention is young adults living with cystic fibrosis (CF), a life-threatening disease that affects one in every 3,000 children. Management of CF has improved and patients now are living into their 20s and 30s. But many of them end up with diabetes because their disease destroys the pancreas, which is the organ responsible for insulin production. Diabetes contributes to their poor nutritional status and may complicate their diminished lung function.

“I want to learn if we can improve overall health of patients with CF by controlling diabetes and overcoming insulin resistance,” Dr. Dixit says. “This will be the first carefully controlled study of its kind.”

Managing the diabetes of CF patients may improve their overall quality of life and possibly extend their life. Being able to improve a CF patient’s nutritional status may also allow him or her to become eligible for lung transplant.

Dr. Dixit’s work is funded by the Father’s Day Council Tucson, the Arizona Elks and LifeScan, Inc.

# HOW MYC-ey Mouse IS ADVANCING CANCER RESEARCH

There are no Disney characters working in our research labs, but the “MYC-ey mouse” may help our researchers develop new treatments for a deadly pediatric cancer. MYCN is a gene associated with advanced neuroblastoma, a pediatric cancer being studied at the Children’s Research Center. The MYCN mouse genetically over-expresses the MYCN gene and as a result, spontaneously develops tumors in the same places children do. These mice provide an excellent model for Rochelle Bagatell, M.D., Assistant Professor of Pediatrics in Oncology, to study new treatments for this often-fatal disease.

Neuroblastoma is the most common pediatric solid tumor outside the brain. Five hundred children in the United States are diagnosed with this cancer each year. Researchers find the disease especially interesting because when a child under the age of 12 months develops neuroblastoma, it often disappears on its own (the only known tumor that does). However, most children are diagnosed when the disease is advanced and their prognosis is dismal. Less than 20 percent of these high-risk patients survive five years.

“The majority of children with neuroblastoma initially respond to conventional chemotherapy,” Dr. Bagatell says. “But unfortunately, the relapse rate is high. We believe that one answer may be to develop a treatment that can be used when the disease is in a minimal state.”

To do that, Dr. Bagatell will observe the development of tumors in the MYCN mice and will test a novel anti-cancer agent that can target neuroblastoma cells on the molecular level.

“The next generation of cancer drugs will be smarter drugs,” Dr. Bagatell says. “We’re working to create drugs that change the biologic basis of the disease instead of just trying to kill the cancer cells. We know in some instances, such as with neuroblastoma, that isn’t enough.”

Dr. Bagatell collaborates with Luke Whitesell, M.D., Associate Professor, and Emanuel Katsanis, M.D., Associate Professor – both with the UA Department of Pediatrics in Hematology/Oncology. Her work is funded by the Arizona Elks, the Caitlin Robb Foundation, the Michael Landon Children’s Cancer Fund, the Children’s Oncology Group, the Dean’s Research Council and the Phoenix Friends of the Arizona Cancer Center.



Andrew Ochoa, age 2, neuroblastoma patient



Ro Bagatell, M.D.,  
pediatric oncologist



Dr. Glenn Green with patient Danielle Stanton.

His research has helped to pinpoint the genetic cause of deafness and now he is working to further understand the role of genetics in deafness.

## Helping Children Hear

Arizona children with medical problems involving the ear, nose, throat or head now can be cared for by a pediatric otolaryngologist (ENT). Glenn Green, M.D., recently completed a two-year fellowship at the University of Iowa and has accepted a faculty position at the University of Arizona. He is the only fellowship-trained pediatric ENT in Arizona.

Dr. Green's clinical expertise is broad. It includes surgical procedures such as repair of craniofacial malformation (cleft lip and palate), reconstruction of the airway to enable children to breathe without tracheostomy tubes, procedures for children having trouble with swallowing and aspiration and operations on tumors and cancers in the head and neck. He also takes care of children with chronic ear and sinus infections and helps children with hearing loss or deafness. He has expertise in cochlear implants and implantable hearing aids.

His research has helped to pinpoint the genetic cause of deafness and now he is working to further understand the role of genetics in deafness.

"We know that the gene called connexin 26 is the predominant cause of deafness," Dr. Green says. "But

only 50 percent of deaf children have this genetic mutation. What's really interesting is that one in five children with this genetic mutation have only moderate hearing loss. And one in 30 children with the mutation don't even need hearing aids. It may be that some children have a genetic immunity to deafness."

Along with researchers at the University of Iowa, Boys Town National Research Hospital, the Pasteur Institute in France, the Murdoch Institute in Australia, the MRC Institute of Hearing Research in England and Tel Aviv University in Israel, Dr. Green has evaluated the hearing of 700 deaf newborns. Some of these babies passed the newborn hearing screen, even though it was later learned that they had the gene for deafness and eventually experienced hearing loss.

"This is obviously an important area for research," Dr. Green says. "It could be that there's a brief opportunity for medical intervention but we don't know yet."

Another area of Dr. Green's research is how genetics influence how well kids do with cochlear implants. These implants have been available to

children since the '80s and allow deaf children to hear much better than they do with traditional hearing aids.

One of the measures of the success of the implants is to track academic achievement among this group of children.

"Deaf children without interventions such as cochlear implants leave high school with an average reading level of a third or fourth grader," Dr. Green says. Through his research, Dr. Green has learned that children with the gene for deafness who have cochlear implants perform as well academically as their hearing peers. Children who are deaf for other reasons and have cochlear implants outperform their deaf counterparts but are not equal to their hearing peers. This research leads to improved diagnostic and intervention strategies for deaf children and improves the accuracy of counseling for these children and their families.

Dr. Green has an appointment as UA Assistant Professor in Pediatrics, Surgery and Speech and Hearing Sciences. "I came to the University of Arizona because I wanted to go where the need is great and the people and resources are excellent." He plans to be busy.



## A DIAMOND TRADITION

A family that has generously supported the Children's Research Center from the start has stepped forward once again with a major gift to advance the study of genetics. The Diamond Foundation, led by Joan and Donald's daughter, Helaine Levy, has donated more than \$300,000 to the Children's Research Center to fund a microarray core facility.

Microarray is a recent technological breakthrough, which hails from progress by the Human Genome Project combined with advances in the computer industry. The microarray technology places thousands of specific DNA spots onto a single slide or chip, which are then used to identify which genes are expressed or "turned on" in a given tissue sample. This approach will radically change the study of human genetics because researchers can begin to understand which groups of genes interact to create disease states.

This is especially important with complex disease states that involve multiple genes, such as asthma, the Diamond family's special interest.

"Asthma has been a part of my family's life for generations," Joan Diamond says. "Our middle daughter Deanne suffered from severe asthma and died shortly before her fourteenth birthday."

Unfortunately, the Diamond family's experience is all too common. More than 4 million children suffer from asthma nationwide, and every year more than 2,000 die.

The microarray core facility will be housed at the Children's Research Center but will be available to genetic researchers across the UA campus. The use of this facility will give a major boost to hundreds of important research projects.

"This is a wonderful gift and an incredible opportunity for us," says Faye Ghishan, M.D., Director of the Children's Research Center. "We are so blessed to have supporters like the Diamond family who share our vision of creating a healthier future for all children."

This is not the first time that the Diamond family's generosity has made a difference at the Children's Research Center. In the years when the Center was first being constructed, the Diamonds made a gift of \$250,000 to underwrite the cost of laboratories dedicated to the study of lung injury. With the acquisition of microarray technology, the mysteries of asthma soon may be more understandable.



## Arizona Elks Clinic

### FOR CHILDREN AND YOUNG ADULTS

Walls are coming down, doors are off their hinges and dust is everywhere. But that's the good news. It means that the pediatric clinic on the third floor of University Medical Center is undergoing a major facelift. And it's happening because of the generosity of the Arizona Elks.

"The Benevolent and Protective Order of Elks is a fraternal organization long committed to the family," says Arizona Elks President Joe Riley. "The Elks raise money in their local lodges, their state associations and nationwide – gladly providing monies for the children and veterans of our country. We are pleased that we can continue to provide monetary support to the Children's Research Center."

Since 1992, the Arizona Elks have been raising money for the Children's Research Center – all across the state. Each year they donate between \$200,000 and \$300,000. This year their contributions topped \$315,000. For the past eight years, money has been set aside to eventually renovate our pediatric clinic. This year it's happening.

Thousands of children are seen in this clinic every year and unfortunately it has not been a very child-friendly place. But that's changing. Funding from the Arizona Elks will create a wonderful environment for children and their parents. The new clinic will have separate waiting rooms for well and sick children, better organized patient rooms, more efficient space for doctors, nurses and our little patients.

By the end of January, we'll be back in action in our new clinic. Children will be better served because of the hard work of the Arizona Elks.

"Kids are kids, not little adults," says Bill Madden, M.D., head of UA section of General Pediatrics. "With the opening of the Arizona Elks Clinic for Children and Young Adults, we have a facility that is designed for kids by the professionals who care for them. Thanks to the generosity of the Arizona Elks and other contributors we have a beautiful, child-friendly facility that will serve the children of Arizona for decades."



# Tee Up For Tots

## A SECOND YEAR OF SUCCESS

We all want to make a difference — to know that somehow we'll leave the world a better place. Some wish for that better place; some work for it. The family and friends of Courtney Page Zillman, a 4-year-old who lost her life to cancer last year, are working to change the future for kids with cancer and for their families.

The second annual Tee Up For Tots golf tournament took place on Aug. 25 at The Golf Club at Vistoso. It was a sell-out crowd and a spectacular event. Last year's tournament, which was the first-ever, raised \$54,000 for the Children's Research Center. Proceeds from this year's tournament reached \$95,000 and money still is coming in.

"Although this was our second golf tournament, it was the first one without Courtney," says Jerry Zillman, Courtney's dad. "It was sad and special and we feel so very grateful to all our supporters."

Now the Tee Up For Tots board of directors will be able to fund a long list of projects to help families with cancer, now and in the future. The first priority for funding is two doctoral fellowships in pediatric cancer research in memory of Courtney. Two researchers will work in the Children's Research Center as "Courtney Page Zillman fellows." These are young researchers working on Ph.D. degrees. They are being trained and mentored by our senior oncology researchers.

The first young scientist to hold this position is Jason Beliakoff, who is working in the lab of Luke Whitesell, M.D., who studies neuroblastoma, the cancer that took Courtney's life. In about three years, he'll have a Ph.D. in cancer biology and will continue his work in cancer research. Yi Zeng has been hired in the lab of Emmanuel Katsanis, M.D., who studies the immunology of neuroblastoma.

"This type of funding is so gratifying for us," Zillman says. "It's an investment in a career of someone who could go on to discover the cure for neuroblastoma. Courtney's memory will always be alive for us. But now her name will be part of the scientific search for better treatments for childhood cancer."

Tee Up For Tots also is creating kits for new cancer patients and their families that include phone cards, meal passes, video rental coupons and other goodies to make the family's hospital stay and treatments at home a little easier. The Make a Wish Foundation, which gave the Zillman family – Jerry, Kathy, Courtney and sister Jenna – a trip to Disney World, received a donation as well. And in addition to all this, money raised from Tee Up For Tots will help pay the salary of a social worker dedicated to the families of little cancer patients at University Medical Center.

"It takes a lot to put on an event like our golf tournament," Zillman says. "We certainly couldn't have done it without the support of our title sponsor, the WLB Group, Inc. and the dedication and enthusiasm of the Tee Up For Tots tournament planning committee. Our Development Director, Kim Flack, was tireless. She gave birth to her second son in May and never missed a beat."

The volunteers had hardly folded up the tables when Zillman started talking about expanding the size of the tournament next year, as well as year-round fund raising. Until then, the Zillman family, Tee Up For Tots board, tournament committee and volunteers can quietly take pride, knowing that their contributions will make a difference. If you are interested in getting involved in next year's Tee Up For Tots, email Kim Flack at [kwflack@aol.com](mailto:kwflack@aol.com).



Jason Beliakoff, Ph.D. candidate,  
Courtney Page Zillman Fellow



# PANDAs Gather

## IN THE PHOENIX VALLEY



Last year a special group of Phoenix Valley women came together to found the Phoenix Women's Board for the Steele Memorial Children's Research Center. Also known as "PANDAs" (People Acting Now Discover Answers), the board held its first children's fashion show in April to raise money for the CRC. Led by Penny Gunning, who was a founding member of the Arizona Cancer Center's Phoenix Friends board, and Robyn DeBell, longtime Children's Research Center board member and friend, the event was a resounding success.

Sponsored by Saks Fifth Avenue and hosted by the Phoenician Resort, the fashion show featured 35 miniature models, sporting spring fashions for the assembled crowd of 350 guests. Professional models from Saks showcased styles for the mothers and grandmothers.

The theme of the fashion show was "Children Helping Children," which was thoroughly embraced by the participating children and their parents. Samantha Johnson, daughter of Arizona Diamondbacks pitcher Randy Johnson, said, "You don't have to be a big person to help sick children." After his turn in the spotlight, little Alex Lendrum said, "I'll do it again and again until all the sick children are better."

The goal of the event was to raise \$80,000 to purchase a new piece of research equipment called the AutoGen 2000. Now in use in CRC laboratories, the AutoGen is a robotic system used to extract and purify DNA samples, which are needed for the genetic research being conducted on a broad array of pediatric diseases.

"This equipment gives our researchers the ability to make progress so much faster," said Faye Ghishan, M.D., Director of the Children's Research Center. "It can take hours to extract DNA. The AutoGen will be a huge help and all 60 researchers here can share it."

With the leadership of Gunning and DeBell, the hard work of the PANDAs, and the support of the Phoenix community, the fashion show surpassed its fund raising goals. "It'll be hard for any of us to look at a panda in the same way ever again," Penny Gunning said.

Next year's show is already scheduled for Saturday, April 28 at the Arizona Biltmore Spa & Resort. Call Shaun Griffith at (602) 266-4820 or Jane Prescott-Smith at (520) 626-7799 for more information.



# Local Dads for Diabetes

Father's Day Council Tucson honored six Tucson fathers to raise money for juvenile diabetes. The Fathers of the Year luncheon reminds us all "what a difference a dad makes" and is a wonderful example of community volunteers working together for a cause.

This year's honorees were Cris Cristiani, CEO of Cristiani Enterprises; Joe Cristiani, President/CEO of Joe Cristiani's Mobile Communications; Gary Hardy, President of Prudential Aegis Realty; Alan Lurie, Executive Vice President of Southern Arizona Home Builders Association; Tom Regina, President of American Openings, Inc. and Mel Zuckerman, Founder/CEO of Canyon Ranch.

The presenting sponsor of Father's Day Council Tucson 2000 was Desert Diamond Casino.

It was an impressive group of men, accomplished in their respective professions, but ever mindful of the importance of family. This year's luncheon raised \$71,000 for the comprehensive juvenile diabetes program at the Children's Research Center.

"We are working toward creating a program that would offer children the best care available anywhere in the world," says Faye Ghishan, M.D., Director of the Children's Research Center.

Diabetes is a complicated disease. Children must be treated in context of their whole family. The best program has not only a pediatric diabetologist but a nurse educator and pediatric nutritionist.

"Last year we hired a diabetologist and support from the Father's Day Council Tucson helped us with equipment and supplies as she started her clinical practice," Dr. Ghishan says. "This year we will be able to bring in a nurse educator and nutritionist. The generosity of the Father's Day Council Tucson and all those who support this organization is making better health care available for children who suffer from diabetes."

The Children's Research Center also will create a research program in juvenile diabetes – to better understand the causes and be able to develop and test new therapies. Recruitment is under way

to fill the Elissa D. Eller Endowed Chair in Juvenile Diabetes, created by a gift from Scott and Laura Eller last year. The physician/scientist who holds this chair will establish basic science and clinical research programs in juvenile diabetes.

"I'd like to give special thanks to Richard and Stella Schaefer and Steve Rosenberg for their hard work and their friendship," Dr. Ghishan says. "They launched Father's Day Council in Tucson and have been instrumental in forging the relationship between our two organizations."

Susan Mannion, President of The Marketing Place, Inc., has assumed leadership of the Father's Day Council. She gladly will accept volunteers for the Father's Day Council Tucson 2001 luncheon and can be reached at (520) 795-4999.

## YOUNG TUCSON WOMEN HELPING YOUNGSTERS EVERYWHERE

“To impact the lives of thousands of children” — this is the goal of The Active Women’s 20/30 Club of Southern Arizona and its new president, Jennifer Wood.

The club is an international, non-profit organization comprised of professional women in their 20s and 30s whose mission is to raise money for children’s charities.

“Every time we meet, our focus is helping children,” Wood said. The club did just that when it gave the Children’s Research Center \$11,000 from the proceeds of its major fund-raising event, the 13th Annual Casino Night. Held in June at the Savoy Opera House, Casino Night 2000 raised more than \$33,000 for local children’s charities.

“It’s really rewarding to be a part of such a dedicated group of women,” Wood said. “We are a young organization, but we have already made a big impact in Tucson.”

The Southern Arizona chapter of the 20/30 club was chartered in 1988. Since then it has raised half a million dollars for local children’s organizations, including the Children’s Research Center.

Funds from Casino Night will be added to the club’s endowment named in honor of its late member, Melody Luyties. The endowment continues to grow each year and the interest is used to support new research projects within the Children’s Research Center to improve the health of Arizona’s children.

As the incoming president, Wood brings with her the experiences from a successful career in the teleservices industry. Wood, along with her mother and brother, run the family owned, Contact One Call Center.

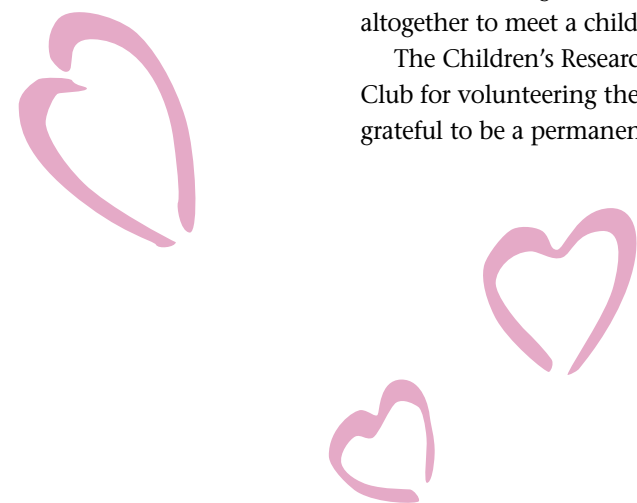
The 20/30 Club recently elected Wood to replace outgoing president Melaina Wilkin, who now is a Children’s Research Center advisory board member.

Wood’s goals for the 20/30 Club this year include a community awareness campaign to develop the reputation of the club within Tucson and increased membership. She also wants club members to get a hands-on experience working with charitable organizations. Wood believes in the importance of literally seeing the impact of your efforts.

“It’s one thing to work hard and give an organization a check. It’s another thing altogether to meet a child who has been personally affected by your work,” said Wood.

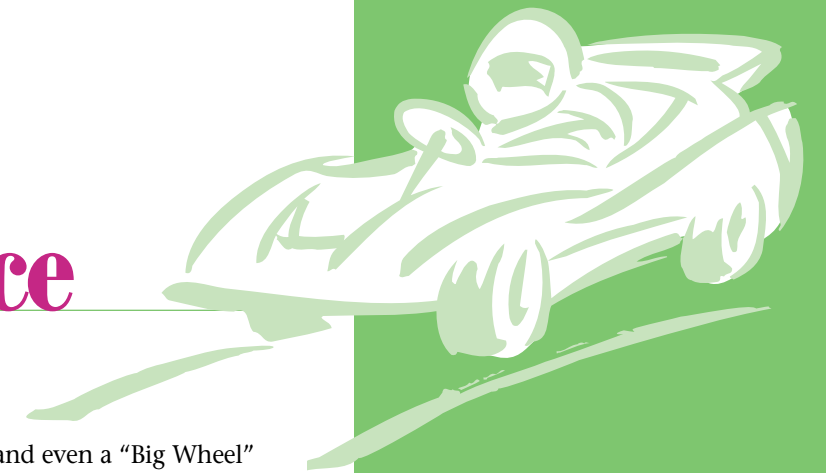
The Children’s Research Center is thankful to the members of the Active 20/30 Club for volunteering their time and talents to change the world for children and is grateful to be a permanent beneficiary of their ongoing support.

The Southern Arizona chapter of the 20/30 club was chartered in 1988. Since then it has raised half a million dollars for local children’s organizations, including the Children’s Research Center.



## Raymond’s Race

### RACING FOR A CURE



People who race top-of-the-line-dragsters, motorcycles and even a “Big Wheel” tricycle teamed up to raise money to battle childhood illnesses. The third annual “Racing for a Cure” was special because it was in memory of a special junior drag racer, Raymond Dixon, who lost his 10-year battle with leukemia this year. Raymond was 13.

“Raymond loved speed and he loved having fun,” said his dad, Greg Dixon. “Ever since he was little, he was always racing something. When he was 9, he got to back a race car off a truck and from then on, he was hooked.”

Being a junior drag racer gave Raymond something to look forward to – in between chemotherapy and before and after his bone marrow transplant. At age 10, he got his first dragster. “I was thinking of writing on the side of the car, ‘Mom said no. Dad said yes,’” Dixon said.

Raymond held his own on the racetrack, racing at speeds of up to 65 miles per hour. He won a few trophies and presented his first one to his bone marrow donor.

“He was such a special kid. He never complained.” Raymond kept racing until complications from his bone marrow transplant forced him to quit early in 1999. His father retired his car but has done something remarkable to help other children with cancer.

With the support of colleagues and friends, Greg Dixon has built a new dragster for two boys – one a former and one a current cancer patient at UMC. This group of supporters has offered to teach the boys to drive, help them get their license and pay for entry fees in local drag races. “I know how happy racing made Raymond and I just want to give these kids something to look forward to. It’s keeping me sane, really.”

This year’s Racing for a Cure raised more than \$20,000. The money will be shared by the Children’s Research Center and University Medical Center. Plans are in the works to create a family center at UMC to offer families of UMC patients and quiet, comfortable place to relax, to create a support system for families and to honor the short life of Raymond Dixon.

Raymond’s life also has been honored by Marana Junior High, where he attended school. The principal there recently announced a Raymond Dixon Fighting Hard award, which will be given to one outstanding student each year in memory of Raymond.

Raymond’s Race – Racing for a Cure was organized by Peggy and Jon Rowley; co-sponsored by The Arizona Jr. Dragster Assoc., Southern Arizona Super Eliminator Association, the Arizona Super Gas, Super Street and Southwestern International Raceway.



Daniel Torrence, 13, Greg Dixon and Jacob Kaster, 12.



# 2000 Gifts

Every gift made to the Children's Research Center is valued and appreciated. We'd like to give special thanks to these donors who gave \$1,000 or more during the last year.

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\* The Pfizer Foundation made a Matching Gift

## INNOVATION + SUPPORT = DISCOVERIES

Every major breakthrough, every major discovery begins as a creative thought. For a creative idea to become a discovery, it must be nurtured and developed. If not, it may die from lack of support.

"Part of my job as Director of the Children's Research Center is to provide support to my researchers – intellectually, emotionally and financially," Dr. Faye Ghishan says. "It's much easier to be creative if you aren't feeling pressured about submitting the next grant and the one after that."

Small seed grants are critical for exploring creative new ideas in science. These small-scale projects can allow a researcher to move in a completely novel direction. New and revolutionary ideas have a difficult time meeting the criteria for government grants, which generally are designed to support more established research projects. The Arizona Elks generously provide six seed grants each year for start-up projects. Others now will be provided by the Director's Endowment for Innovative Research.

"This new research fund gives us the ability to fund fledgling research projects that push the boundaries of knowledge and enhance our understanding of childhood diseases," Dr. Ghishan says. "This is one of the best ways to encourage the research careers of young physician/scientists and to create meaningful improvements in children's health."

Gifts in any amount can be earmarked for the Director's Endowment for Innovative Research. Call Jane Prescott-Smith at (520) 626-7799 if you are interested in learning more.



## Joan Diamond

### APPOINTED LIFE MEMBER of the Children's Research Center Advisory Board

Joan Diamond has been a generous and loyal supporter of the Steele Memorial Children's Research Center since before the Center began. "Joan was chosen for Life Membership because of her unwavering commitment to the Children's Research Center and to advancing research to improve children's health," says CRC Center Director Dr. Faye Ghishan.

Joan has been a member of the CRC advisory board since 1987, and has lent a quiet strength to the board's activities over the years. "Dr. Lynn Taussig knew of my interest in pediatric asthma and asked me to become involved in the effort to create a facility that would be dedicated to studying children's illnesses," Joan says.

Saying yes to pressing community needs is something of a habit for Joan Diamond. "Joan is very caring and very concerned about the community," says longtime friend and fellow CRC advisory board member Maxine Henig. "She is a private person. She doesn't need to see her name in lights. I know that serving the community through volunteer work and philanthropy gives her pleasure."

A near native, Joan moved to Tucson in 1947 to study music at the University of Arizona. It was here she met Donald Diamond. The two were married in 1952 and moved to New York where Donald ran a successful commodities business. In 1965 they returned to Tucson primarily because of their middle daughter's severe asthma.

"My mother was the glue that held the family together," says her daughter Helaine Levy. "Her life has always revolved around the family. I learned about service to the community from my parents. As long as I can remember, my mother was involved in volunteer work."

One of Joan's first volunteer activities after returning to Tucson was to teach needlepoint to women at the Brewster Center. There's been no stopping her since.

In addition to her support of the Children's Research Center, Joan Diamond has served on the boards of the Tucson Jewish Community Center, Angel Charity for Children, the Women's Division of the Jewish Federation of Southern Arizona and the Tucson Symphony Orchestra.

Joan's husband Don comments, "I am very proud of my wife's commitment, the work she has put in and the success of the Children's Research Center. I hope that our entire family continues to be supportive."



# ROAR

## REACH OUT AND READ

Pediatricians in the UA Department of Pediatrics are writing prescriptions for literacy. Instead of handing out lollipops to little patients, doctors are giving books.

“The majority of kids seen in our Arizona Elks Clinic for Children and Young Adults are from low-income families,” says Donna Voldengen, M.D., pediatric resident. “Their parents simply cannot afford to buy books and have limited time to read to their children.”

Now pediatricians will address these issues by introducing a program called Reach Out and Read or ROAR. It’s modeled on an initiative begun by pediatricians at Boston City Hospital in 1989 that has been replicated in hundreds of U.S. hospitals.

“Pediatricians see reading as essential to both the mental and physical health and development of newborns and toddlers,” Dr. Voldengen says. Recent

research has shown that stimulation, like reading aloud, is crucial to brain development in the early years. ROAR will teach parents how important reading is to all aspects of their child’s well being.

The program’s message is delivered in three parts. First, when parents bring their children to the clinic waiting room, volunteers read to the children and demonstrate reading-aloud techniques to the parents.

Second, during the medical visit, a pediatrician or nurse practitioner will talk to the parents about the importance of reading and emphasize the long-term benefits for their children.

At the end of the visit, every child between 6 months and 5 years old is given a new book to take home. “This is the most important aspect of ROAR,” said Carol Zuckert, ROAR Program Coordinator. “You have never seen a more joyous smile than when a child knows that new book is hers to keep.”

By the time a child reaches age 5, she will have a collection of at least 10 books to call her own. The annual cost to provide books and train pediatric staff and volunteers is less than \$15 per child.

A four-year study by Robert Needleman, M.D., the creator of Reach Out and Read from Rainbow Babies and Children’s Hospital in Cleveland, has shown that children who received books

performed better on language tests and generally showed more interest in school. “This program cannot immunize children against academic troubles, but when well supported, it can help children hit the ground running,” Zuckert says.

Few physicians are taught to emphasize reading during their medical training. Through Reach Out and Read, pediatricians come to understand their role in helping parents promote literacy and academic development. ROAR also creates a ripple effect as residents embrace the program and continue advising parents of its message long after they have left residency.

“Reach Out and Read really is inspirational,” says Zuckert. “This program has the potential to touch so many young lives right here in our own backyard, one child at a time.”

The ROAR program has been operating at Kino Hospital for several years, funded by the Community Foundation for Southern Arizona. The program at the University of Arizona Department of Pediatrics recently received start-up funding from CRC Advisory Board member, Maxine Henig and her husband Ralph. If you are interested in supporting the ROAR program, please call Keri Valdés at (520) 626-7051, or [kvaldes@peds.arizona.edu](mailto:kvaldes@peds.arizona.edu).



## MORNING FOR CHILDREN’S HEALTH – FEBRUARY 9

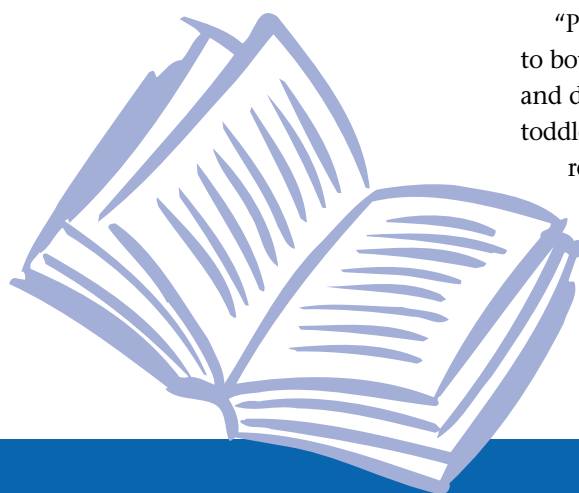
It’s one of the few topics parents can never get enough of – our kids. What did you do when this happened? What’s the best way to deal with that? Who do you know to take care of this problem? It seems that we never exhaust our need for more information on kids and parenting.

With that in mind, the Special Events Committee of the Children’s Research Center is hosting the second annual **Morning for Children’s Health** event on February 9 at The Westin La Paloma. Keynote speaker is Kevin Leman, Ph.D., a Tucson-based psychologist who has written dozens of best-selling books on children, parents and the relationship between the two. His most recent book is *What a Difference a Daddy Makes*, a look at “the indelible imprint a dad leaves on his daughter’s life.” Dr. Leman will offer parents his unique, sometimes controversial, always loving viewpoint on bringing up kids without tearing them down. (That’s the title of another one of his books.)

Other topics will include: Health Concerns for Ages 10 to Teens, Stress Relief for Kids and Parents, Multiple Intelligences – Identifying Your Child’s Gifts, Promoting Positive Body Image and Good Eating Habits. It will be three hours filled with valuable information, new insights and a few belly laughs.

“Being a parent is the most important and, some would say, the most demanding and confusing job in the world,” says Kathleen Kirk-Anderson, CRC advisory board member and Chair of the Special Events Committee. “We attend professional conferences to advance our careers. This is a morning conference to help us all be better parents.”

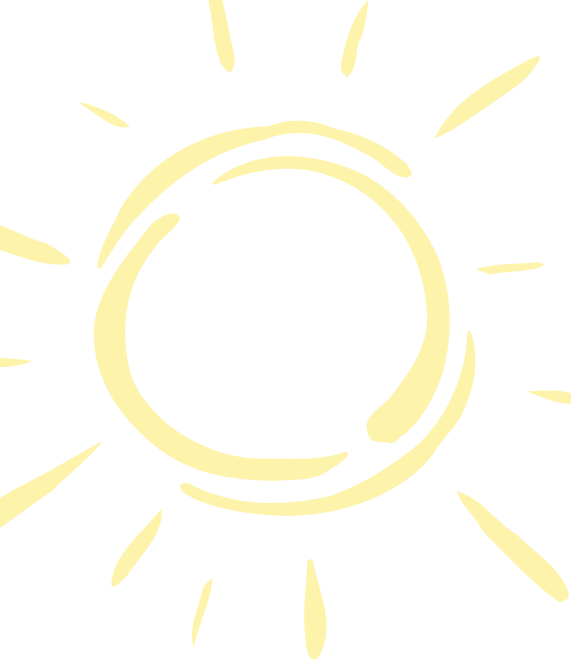
The cost of the morning event is \$50, which includes a light breakfast. All proceeds will benefit the Children’s Research Center. Seating is limited. Please call Keri Valdés at (520) 626-7051 for ticket information.



## VOLUNTEER READERS NEEDED

The Reach Out and Read program needs volunteers to read to children in the pediatric outpatient clinic within University Medical Center.

Orientation and training will be provided. Those interested in becoming volunteer readers can call Cynthia Rouw, Manager of Volunteer Services at University Medical Center, (520) 694-6706.



## PEDIATRIC CHIEF RESIDENTS WANT KIDS IN **Car Seats**

Waiting at a stoplight, Alice Berger, M.D., Co-Chief Pediatric Resident at the UA, saw a man in another car holding a baby in his lap. She got out of her car and politely asked him to put the baby back into her car seat. He did and may have prevented a tragedy that Dr. Berger and her fellow pediatric residents see all too often.

Many of us may feel uncomfortable about making such a suggestion, but for Dr. Berger, it was easy.

“Just recently, I ran to the ER to take care of a little girl who was in a car accident. She was dead by the time I got there because she wasn’t in a car seat. When the air bag opened, it severed her spinal cord,” Dr. Berger says. “There was nothing any of us could do.”

Dr. Berger and her colleague Sandy Herron, M.D., Co-Chief Pediatric Resident, have witnessed hundreds of injuries that result when children involved in car accidents are not properly restrained in car seats.

“One of our goals is to launch a public awareness campaign to educate parents about the different types of child safety restraints and how to use each properly,” Dr. Herron says. “Many parents aren’t aware of the dangers they expose their kids to when they don’t put them in car seats.”

Accidents are the number one cause of all deaths in children age 1 to 15. “The only way to reduce deaths from accidents is through community involvement and education,” Dr. Berger says. “We also want to raise awareness about car safety with our pediatric residents – so they start asking parents about car seats.”

Chief residents are chosen by pediatric faculty members and remain a year beyond their residency to mentor and help supervise 36 pediatric residents, or physicians in training. Both Drs. Herron and Berger believe that the job of chief resident is rewarding and gives them the chance to be role models for pediatric residents.

In addition to advocating for children in the community, “We help train residents, learn leadership and management skills, and benefit from working with some of the country’s most talented pediatricians,” Dr. Herron says.

“By raising awareness of public safety concerns, we can teach residents how to be active in taking care of all the health needs of their patients, not just the ones that end up in the doctor’s office,” Dr. Herron says.



*Alice Berger, M.D. and Sandy Herron, M.D. with little friend, Annelis Voldenhen, 18 months old*



## Holiday Cards

### HELP KIDS WITH CANCER

Chemotherapy, radiation treatments and a few IV poles didn’t keep our pediatric cancer patients from having fun with a little paint this summer. The painting project was to design holiday cards to raise money for the Pediatric Oncology Patient Assistance Fund.

The need is great. Each year in our community, 40–50 children are diagnosed with cancer. It is the second leading cause of death for children in the United States. Cancer treatment can take months or even years.

“It’s impossible to imagine the toll that cancer takes on a child’s family,” says John Hutter, M.D., head of Pediatric Oncology at the Children’s Research Center. “The fact that your child has cancer is tough enough, but many families face severe financial difficulties as their child undergoes cancer treatment.”

The Pediatric Oncology Patient Assistance Fund will provide support to these families – families who need help with transportation, lodging, household expenses and bereavement expenses when necessary.

Tucson artist Cynthia Rose supervised the children’s painting project. The cards are available in packages of 10 for \$10 at all the Tucson and Green Valley Bashas’ grocery stores. They also are available in the gift shop at UMC and by calling (520) 694-7561.



## Cardiology

■ **Scott Klewer, M.D.**, Assistant Professor of Pediatrics, is a co-principal investigator of a new “Program Project Grant” to study heart valve development. Dr. Klewer’s project is one of five funded through a larger \$8.8 million grant from the National Institutes of Health’s National Heart Lung and Blood Institute.

■ **Ricardo Samson, M.D.**, Assistant Professor, received a Dean’s Physician Scientist Award from the Dean’s Research Council and a Mentored Clinical Physician-Scientist Award from the National Institutes of Health.

## Critical Care

■ **Robert Berg, M.D.**, Professor and Section Chief, received an Arizona Disease Control Grant. The funding will allow Dr. Berg to find optimal treatments for successful resuscitation after prolonged ventricular fibrillation.

■ **Robyn Meyer, M.D., M.S.**, joined the Department of Pediatrics as Assistant Professor of Clinical Pediatrics. Dr. Meyer recently completed her fellowship in Critical Care at the University of Michigan at Ann Arbor.

■ **Andreas A. Theodorou, M.D.**, Associate Professor of Clinical Pediatrics at the University of Arizona, has been named to the Arizona Governor’s Council on Spinal and Head Injuries – a statewide body that provides education about the effects, treatment and prevention of spinal cord and traumatic brain injuries and funds services for those affected by these injuries.

## Endocrinology

■ **Naznin Dixit, M.D., D.M.**, joined the Department as Assistant Professor of Clinical Pediatrics. Dr. Dixit recently completed a fellowship in pediatric endocrinology and metabolism at New York University School of Medicine/ North Shore University Hospital. Dr. Dixit’s focus is children with diabetes, obesity, growth problems and thyroid, adrenal and puberty disorders.

## Gastroenterology and Nutrition

■ **Uwe Blecker, M.D., Ph.D.**, joined the faculty as Professor of Pediatrics and Section Chief in Gastroenterology and Nutrition. Dr. Blecker moved to Tucson from Wilmington, Del., where he was an Associate Professor of Pediatrics at Jefferson Medical College and Program Director of the combined Fellowship in Pediatric Gastroenterology and Nutrition.

■ **James Collins, Ph.D.**, Research Assistant Professor, received the Dean’s Research Council Grant and an Arizona Kidney Foundation Grant. Dr. Collins also received funding through an Arizona Disease Control Grant to study nicotine’s effect on a specific protein in the lungs.

■ **Fayez K. Ghishan, M.D.**, Department Head, Professor of Pediatrics and Physiology and Director of the Children’s Research Center, received an extension of his National Institutes of Health MERIT award for an additional three years. The MERIT award honors the outstanding achievements of a NIH-funded investigator who has been funded for a specified amount of time. Dr. Ghishan was appointed to Pfizer’s Children’s Hospital Department Chairs Advisory Council. He also was one of the country’s senior scientists invited to help the National Institutes of Health review its study section and peer review process.

## General Pediatrics

■ **Rodrigo Villar, M.D.**, joined the faculty as Assistant Professor of Clinical Pediatrics with a major role as the Medical Director for Children’s Clinics for Rehabilitative Services. Dr. Villar completed medical school and residency at the University of Arizona and was Chief Resident 1995-96. Before moving to Tucson, Dr. Villar was a medical epidemiologist for the Centers for Disease Control and Prevention in Atlanta and most recently worked as a general pediatrician for the Indian Health Service in Gallup, N.M.

## Genetics

■ **Christopher Cunniff, M.D.**, Professor of Pediatrics and Chief of the Section of Medical and Molecular Genetics, was selected for the Dean’s List for Excellence in Teaching. Dr. Cunniff and John Meaney, Ph.D., Research Associate Professor of Pediatrics, were awarded a five-year Cooperative Agreement with the Centers for Disease Control and Prevention to conduct population-based surveillance for autism spectrum disorders in Arizona. Dr. Meaney also directs the University of Arizona component of the Arizona University Affiliated Program that focuses on developmental disabilities.

## Hematology/Oncology

■ **Rochelle Bagatell, M.D.**, was promoted to Assistant Professor of Pediatrics. She also received a Dean’s Physician Scientist Award.

## Infectious Disease

■ **Leslie Barton, M.D.**, Professor of Pediatrics, received the Vernon and Virginia Furrow Award for Excellence in Graduate Medical Education Teaching.

■ **Sean Elliott, M.D.**, Assistant Professor of Clinical Pediatrics, received a Dean’s Research Council Grant.

## Neonatology and Developmental Biology

■ **Bohuslav Dvorak, Ph.D.**, Research Assistant Professor of Pediatrics and Cell Biology, was awarded the 2000 Ehrlich-Koldovsky Young Investigator Award for Research in Human Milk and Lactation by The International Society for Research in Human Milk and Lactation. The award is named in memory of Otakar Koldovsky, M.D., Ph.D., UA Professor of Pediatrics in Neonatology, an international leader in research on components of breast milk, who died in 1998.

■ **Catherine Jones, M.D., Ph.D.**, joined the faculty as Assistant Professor of Pediatrics in Neonatology. Dr. Jones moved to Tucson from Houston, Texas, where she was an Assistant Professor of Pediatrics at Baylor College of Medicine. She completed a Ph.D. in Cell and Molecular Biology, also at Baylor. Dr. Jones’ research interest is gene therapy.

■ **Pamela Kling, M.D.**, Associate Professor of Pediatrics, received a Dean’s Physician Scientist Award.

## Nephrology

■ **Mehul Dixit, M.D.**, Assistant Professor of Clinical Pediatrics, received a grant from the Arizona Kidney Foundation to study the relationship between high blood pressure and salt absorption in the kidney. Dr. Dixit has also received partial support from the Southern Arizona Kidney Foundation and the Arizona Elks to conduct a series of community-based screening programs in rural parts of Arizona to identify those at risk for developing advanced renal disease.

## Neurology

■ **Kara Stuart Lewis, M.D.**, joined the Department of Pediatrics as Assistant Professor of Clinical Pediatrics in Neurology. Dr. Lewis moved to Tucson from Phoenix, where she was a child neurologist with the Barrow Neurological Group. Dr. Lewis’ interest is the genetics of pediatric brain tumors, neurometabolic disorders, attention deficit hyperactivity disorder, and autism/ pervasive developmental disorders.

## Pulmonary

■ **Wayne Morgan, M.D.**, Professor of Pediatrics and Chief of the Section of Pediatric Pulmonology, is the principal investigator, and Mark Brown, M.D., Associate Professor of Clinical Pediatrics, is co-principal investigator, of a \$1.25 million federal grant to establish a Pediatric Pulmonary Center within the Department of Pediatrics. The Center will be one of only eight in the nation. The funding will allow pediatric pulmonologists to provide advanced training in the care of children with chronic lung diseases to health professionals throughout the West.

Dr. Morgan was selected for the Dean’s List for Excellence in Clinical Teaching Award. He is also principal investigator of the Tucson Field Center of the National Inner City Asthma Study. This is a NIH funded study of environmental and physician interventions to improve the outcomes of children with asthma who live in the inner city.

## CHILDREN’S RESEARCH CENTER Advisory Board

We appreciate our advisory board all year long, but this is a nice time to give thanks and recognition. The members of the CRC advisory board are an extraordinary group — unwavering in their commitment to children’s health. Their hard work will make life a little easier for children.

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*Associate Professor Clinical Pediatrics*

**Pulmonary**

Brown, Mark, MD  
*Associate Professor Clinical Pediatrics*

Guilbert, Theresa, MD  
*Assistant Professor*

Holberg, Catharine, PhD  
*Research Associate Professor*

Martinez, Fernando, MD  
*Professor*

Morgan, Wayne, MD  
*Professor/Section Chief*

Wright, Anne, PhD  
*Research Professor*

**Rheumatology**

Alepa, Paul, MD  
*Associate Professor*

**UAP**

Meaney, F John, PhD  
*Research Associate Professor*



**ABOUT THE COVER:**  
Helaine Levy, Executive Director of the Diamond Foundation, with her son Nathan, 12. Cover photo by Martha Lochert.

**Credits**  
**2000 Report**

**Editor/Writer**

Kate Maguire Jensen, MPH  
*Director of Community Affairs Children's Research Center*

**Contributing Writer**

Keri Hiller Valdés, MPA  
*Manager of Special Projects Children's Research Center*

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