

STEELE CHILDREN'S RESEARCH CENTER



**2005
FALL/WINTER
UPDATE**

*A Research
Breakthrough:
Cloning of the
Athabaskan
Brainstem
Dysgenesis Gene*

*Rescuing
Premature
Babies from NEC*

*Investigating
a Novel Anti-
Cancer Vaccine*

*"Raise a Racquet
for Kids" Exceeds
Expectations*

*How Cancer
Changed the
Direction of My
Life—For Good!*

THE UNIVERSITY OF
ARIZONA[®]
COLLEGE OF MEDICINE



IN LOVING MEMORY

This issue of the Steele Children's Research Center biannual report is dedicated to Marcia, Michael and Christa Parseghian, three beautiful children who passed away from Niemann-Pick Type C (NPC), a rare and debilitating genetic neurodegenerative disease. Marcia, 16, passed away in August; Michael, 10, passed away in 1997, and Christa, 10, passed away in 2001.

Marcia, Michael and Christa experienced life to the fullest, whether it was participating in karate, ballet, going to school and having fun with their many friends. They were always happy to be around people and express their love.

Throughout such difficult times, the Parseghian family has exemplified unselfishness, genuine warmth, and extraordinary love for others. Refusing to be defeated by this devastating disease, parents Mike and Cindy Parseghian established the Ara Parseghian Medical Research Foundation to begin investigating Niemann-Pick Type C. As a result of their courageous efforts and the dedication of hundreds of Tucson volunteers, great advances in the understanding of NPC disease have been made that ultimately will contribute to an effective treatment.

We have been deeply blessed by the lives of Marcia, Michael and Christa. They will forever have a place in our hearts.

*William S. Garver, PhD
Randall A. Heidenreich, MD
Robert P. Erickson, MD
Fayez K. Ghishan, MD*

Steele Children's Research Center

The Steele Children's Research Center is a place where internationally recognized researchers work together to solve the medical problems of children. Our pediatricians, who also are faculty members in The University of Arizona Department of Pediatrics, play a unique role in the community—as physicians, researchers and teachers. Our goal is to advance medical knowledge to help improve the health of Arizona's children and children throughout the world.

Dedicated in 1992, the Steele Children's Research Center was built with private funds to advance the health concerns of children. The Steele Center was named in honor of the late Horace W. Steele of Phoenix. The Steele Foundation donated \$2 million to help build the Steele Children's Research Center. We continue to thrive with the support of the community.

Only 14 percent of the Steele Center's budget is covered by state dollars. The rest comes from clinical income, research grants and philanthropic support.

To learn more about the Steele Children's Research Center, please visit our Web site at www.steelecenter.arizona.edu. The Steele Center is proud to be one of the centers of excellence at The University of Arizona College of Medicine.

A Year of Growth, A Year of Change, A Year of Challenge: Letter from the Director

The past year has been a year of growth, a year of change, and a year of challenge at the Steele Children's Research Center.

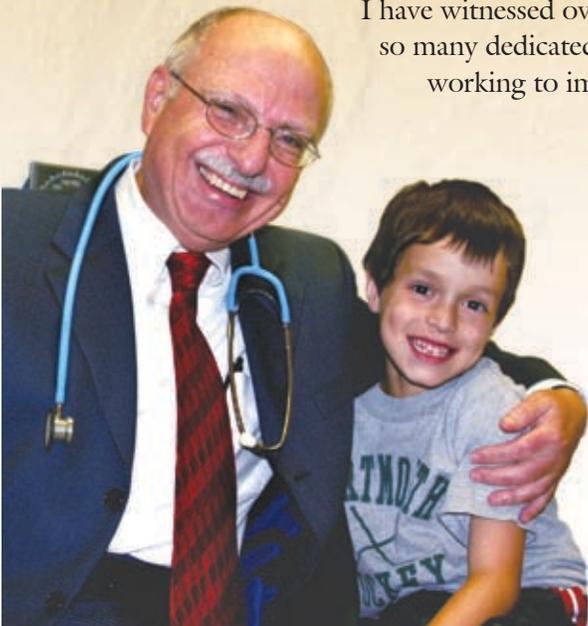
As I wrote in last year's annual report, we are committed to increasing our faculty so we can help more children and become a national leader in children's medical research. Toward that end, we hired five outstanding physician/scientists this year (*see story, page 12*), and are in the process of recruiting nine more promising candidates. This has indeed been a year of growth.

In addition, 2005 was a year of change. After many years of dedicated service, beloved pediatricians and respected faculty members Dr. Burris "Duke" Duncan and Dr. John Hutter have retired. Their service to our community and to pediatric medicine has been immeasurable. And, after five years of outstanding service, our Director of Development, Jane Prescott-Smith, accepted a job opportunity with The University of Arizona Eller College of Management. We wish Jane well in her new endeavor. After a comprehensive search for a new development director, we were fortunate to find Monica Hardt-Delisa, MA. Monica is passionate about children's health and has many years of development experience. We look forward to her leading our fund-raising and development efforts.

The past year had many challenges, as well. The National Institutes of Health—the federal funding agency for medical research grants—has significantly reduced its funding, making it even more difficult to secure vital research funds. Thus, the need to increase our fund-raising is more important than ever.

Despite these challenges, we continue to make major advances in children's health. Our graduate students, under their faculty mentors, have been doing an outstanding job. For example, PhD candidate Jennifer Uno has made a new discovery that explains how inflammation can cause a decrease in bone-mineral density. She presented this work at a national meeting and submitted her work for publication (we will have an article about this exciting discovery in the 2006 Spring/Summer Steele Center Update). We are blessed with having wonderful students who love science and want to make a difference in children's health.

I have been leading the Steele Center for 10 years now, and the progress I have witnessed over the years is inspiring. What an honor to work with so many dedicated physicians, researchers and graduate students who are working to improve the lives of children.



Faye K. Ghishan

Faye K. Ghishan, MD
Horace W. Steele Endowed Chair in Pediatric Research
Director, Steele Children's Research Center
Professor and Head, UA Department of Pediatrics



Dr. Emmanuel Katsanis Named 'Louise Thomas Endowed Chair in Pediatric Cancer Research'



After a comprehensive national search, **Emmanuel Katsanis, MD**, Professor of Pediatrics, has been named the **Louise Thomas Endowed Chair in Pediatric Cancer Research** for the Steele Children's Research Center.

"We are delighted that Dr. Katsanis has accepted this position," says **Fayez K. Ghishan, MD**, Professor and Head of the Department of Pediatrics, and Director of the Steele Center. "After reviewing many qualified candidates from around the United States, Dr. Katsanis clearly was the most exceptional candidate interviewed by the search committee," he said. "Dr. Katsanis is an outstanding researcher, physician and educator. We are confident that he will build one of the strongest pediatric cancer research programs in the nation."

Dr. Katsanis' research efforts are focused on studying the immunostimulatory activities of a heat shock protein anti-cancer vaccine

"This vaccine would boost the patient's immune system, thus warding off any remaining cancer cells and reducing the possibility of the cancer returning."

named Chaperone Rich Cell Lysate (CRCL). His research team is studying the effects that CRCL has on the different cells of the immune system and how best to combine

CRCL with drug therapy against cancer. "Essentially, we are developing a therapeutic vaccine that would be administered to the cancer patient after their successful chemotherapy treatment," explains Dr. Katsanis. "This vaccine would boost the patient's immune system, thus warding off any remaining cancer cells and reducing the possibility of the cancer returning."

The Louise Thomas Chair in Pediatric Cancer Research was named after Louise Thomas, a passionate advocate of children's health and a driving force behind the Steele Children's Research Center since its inception. After the painful experience of losing a son to cancer, Louise and her husband, Al, became advocates for the importance of medical research to find new treatments for childhood diseases. "As part of the search committee, I'm thrilled that we have found such a committed researcher, dedicated physician and enthusiastic educator in Dr. Katsanis," says Ms. Thomas.

"I am honored to be appointed the The Louise Thomas Chair in Pediatric Cancer Research," says Dr. Katsanis. "This Chair will help support my laboratory, facilitate the recruitment of additional top-notch researchers and enable me to dedicate more time to pediatric cancer research."

A Research Breakthrough:

Investigators at the Steele Center and Harvard University Clone Athabaskan Brainstem Dysgenesis Gene



Steele Center investigator **Robert P. Erickson, MD**, and Elizabeth Engle, MD, from Harvard University, recently cloned the gene that causes **Athabaskan Brainstem Dysgenesis**. This devastating disease is found in some Southwestern Native American populations including Navajo and Apache tribes in Southern Arizona.

Their study, *Human HOXA1 syndrome disrupts brainstem, inner ear, cardiovascular and cognitive development* has been published in the prestigious scientific journal *Nature Genetics*. The study was funded by grants from the Muscular Dystrophy Association and the National Institutes of Health.

"Athabaskan Brainstem Dysgenesis causes breathing problems, deafness, inability to move the eyes properly, and mental retardation. In many cases, it also causes congenital malformations of major vessels in the heart, which can lead to death," says Dr. Erickson.

The gene, named *HOXA1*, is one that is known to be involved in patterning

"By cloning this gene we will now be able to develop tests to detect carriers of the gene and provide prenatal diagnosis and support for those who wish it. Future experiments on this gene may tell us more about the causation of deafness and mental retardation."

the brainstem during early development. The brainstem is responsible for automatic responses like breathing, heart rate, blood pressure and digestion. The research study had some unexpected results. "We don't think of the brainstem as affecting higher brain function and the fact that the mutation of this gene, which is expressed in the brainstem, affects higher brain function was something we could not have predicted," explains Dr. Erickson.

"Single mutations in other *HOX* genes are involved in several human diseases, but this is the first case known in which mutations are necessary in both copies of the gene to cause the disease. The disorder can now properly be called 'Human *HOXA1* Syndrome,'" says Dr. Erickson.

What are the practical applications of this discovery? "By cloning this gene we will now be able to develop tests to detect carriers of the gene and provide prenatal diagnosis and support for those who wish it. Future experiments on this gene may tell us more about the causation of deafness and mental retardation," says Dr. Erickson.

Rescuing Premature Babies from NEC — a Devastating GI Disease

Babies born prematurely have several potential health challenges to contend with. One illness that afflicts many premature babies is neonatal necrotizing enterocolitis (NEC)—a life-threatening intestinal disease. NEC is an inflammatory disease that can cause destruction of the small and large intestine. If it becomes severe, a premature baby may have portions of his or her diseased intestine surgically removed, resulting in lifelong digestive difficulties.

There are approximately 9,000 cases of NEC in the U.S. each year, and about 20-30 percent of these children will not survive. The exact cause of NEC is unknown and no specific treatment exists for this devastating disease. Thus, searching for therapies to prevent or reduce the incidence and severity of NEC is critically important.

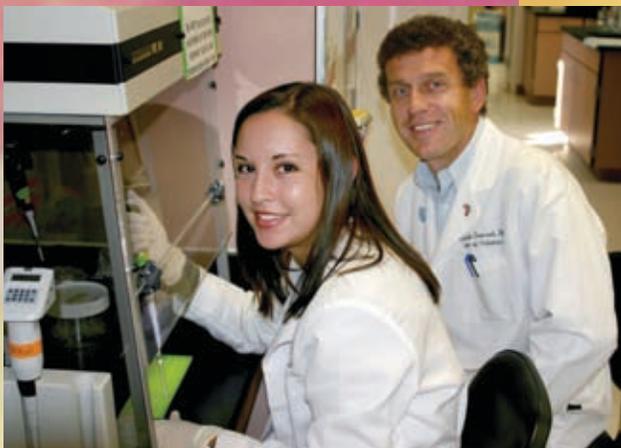
Steele Center investigator **Bohuslav Dvorak, PhD**, Research Associate Professor and the Director of Research in the Section of Neonatology and Developmental Biology, has been studying this disease for the last five years. His research has focused on a substance found in breast milk, which may prevent the disease or reduce its severity. “Just by adding one substance to infant formula, we have reduced this disease by 50 percent in our experimental model of NEC,” says Dr. Dvorak.

“We’ve known for awhile that breast-feeding protects against NEC. Babies who are breast-fed have an incidence rate six to 10 times lower than babies fed infant formula,” explains Dr. Dvorak. “Breast milk contains a large number of biologically active substances that can directly affect gut maturation and protect the intestinal tract. One of these substances, epidermal growth factor (EGF), is a peptide found at high concentrations in breast milk. However, EGF is not found in any commercial infant formulas because it does not survive pasteurization and other processes involved in infant formula preparation.”

In initial studies supported by the National Institute of Child Health and Human Development, Dr. Dvorak was looking for the most efficient dose and the best route of administration of EGF to reduce the incidence of NEC in an animal model. The results from these studies were published in peer-reviewed journals over the past years. In July 2005, Dr. Dvorak received a five-year renewal of his R01 grant to clarify *how* EGF is protecting the intestine against NEC injury.

To answer this question, **Jessica Clark**, a doctoral student in the Physiological Sciences Graduate Interdisciplinary Program who works in Dr. Dvorak’s lab, is exploring EGF at the molecular level. “I’m investigating how EGF creates a protective barrier in the intestine when NEC is beginning to develop,” she says.

The work of Dr. Dvorak and Ms. Clark continues to move forward. “Several months ago, the National Institutes of Health asked me to participate in the development of a pre-clinical trial using EGF,” says Dr. Dvorak. “Our studies are very important and timely. Better understanding of how EGF heals at the molecular level is a critical step before any clinical trial with NEC patients can begin. So, we are well on our way to getting closer to a clinical trial and developing effective therapies and treatments for this disease.”

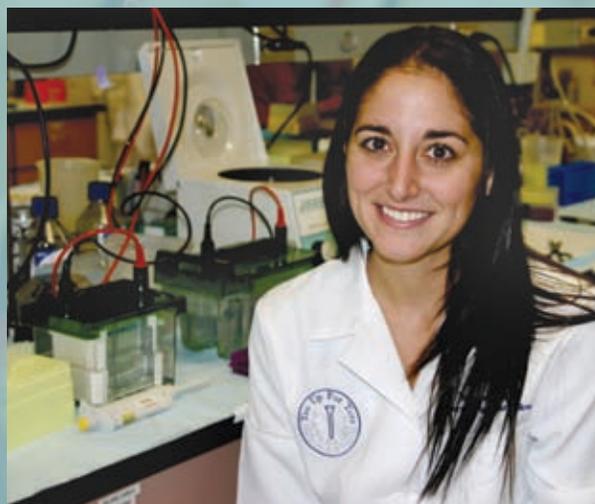


*Jessica Clark, PhD candidate, and
Bohuslav Dvorak, PhD.*

Tee Up For Tots Courtney Page Zillman Fellow 2005:

Jessica Cantrell

Investigating a Novel Anti-Cancer Vaccine



Tee Up For Tots is proud to sponsor **Jessica Cantrell** as the 2005 **Courtney Page Zillman Fellow**.

Currently pursuing a PhD in cancer biology, Jessica is grateful for being named the Courtney Page Zillman Fellow for 2005. "This is a great honor," says Jessica. "This fellowship gives me the opportunity to make a difference in the world, while I pursue the work I love."

Jessica is working on a cutting-edge project in the lab of Steele Center investigator **Emmanuel Katsanis, MD**, Professor and Louise Thomas Endowed Chair for Pediatric Cancer Research.

The project involves studying the effects of a promising chaperone protein anti-cancer vaccine known as CRCL (Chaperone Rich Cell Lysate) developed in Dr. Katsanis' laboratory. Chaperone proteins have been shown to stimulate the immune system. Other chaperone protein vaccines are being used clinically, but the CRCL vaccine, currently under development at the Steele Center, has some significant advantages. "Whereas other investigators have used single chaperone protein vaccines, we've come up with a way to enrich for multiple chaperone proteins. So there are many chaperone proteins in our vaccine," explains Jessica. "This is important because the CRCL vaccine may carry more tumor antigens to stimulate immune cells than a single chaperone protein vaccine. In terms of the clinical applications, CRCL is easier to create, compared to other vaccines. CRCL has a rapid turnaround time from tumor harvest to treatment of the patient, and

"By understanding how CRCL stimulates the immune system, we will be able to develop a novel therapy that combines the vaccine with traditional chemotherapy."

we are able to yield ample amounts of the vaccine for clinical use. Thus, our vaccine shows promise of being more effective."

Jessica currently is investigating what the CRCL vaccine's mechanism of action is, to understand how the immune system is stimulated. "By understanding how CRCL stimulates the immune system, we will be able to develop a novel therapy that combines the vaccine with traditional chemotherapy. We'll be able to determine what kind of chemotherapeutic drug will be the most effective in treating cancer with our vaccine," she explains.

The Steele Center is proud of this energetic, positive and creative researcher with ambitions to help people with cancer through research. The Zillman Fellowship provides the necessary foundation for this young investigator's career path. What are Jessica's career goals? "I would one day like to work for a government agency. Possibly at the National Cancer Institute, the World Health Organization, the National Institutes of Health or the Centers for Disease Control and Prevention, to name a few," she says.

"The Zillman Fellowship enables me to do what I love and what makes me happy in life. I learn new things every day, and it is fun to use my imagination to think of innovative projects that make me excited to go to work. Without the Courtney Page Zillman Fellowship none of this would be possible."



Mighty Things From Small Beginnings

Grow:

*Raise a Racquet for Kids
2005 Exceeds Fund-raising
Expectations*



*Wimbledon champion
John Austin, Steele
Center Director Fayez K.
Ghishan, MD, Megan
Eklund, Travis Carson,
and Anne Fritz.*

Raise a Racquet for Kids 2005 smashed all expectations this year. Even heavy rains Friday evening failed to dampen the spirits of auction bidders and dinner attendees. And Saturday brought beautiful weather for the tennis tournament. The fun, family-centered tennis fund-raising event that raises money for pediatric cancer research at the Steele Center raised more than \$75,000—significantly more than in previous years.

“I’m just thrilled with this year’s outcome,” says RARK founder **Anne Fritz**, a University of Arizona molecular biologist and former tennis pro. “I believe this year’s record-breaking success is due to the commitment of our volunteers, who worked very hard, many

generous donations and acquiring additional sponsorships—particularly our title sponsor, EXG Investments.”

“When it started to rain, our volunteers and participants rallied to quickly move the silent auction items inside Tucson Racquet and Fitness Club. Despite everything being put into a small room, the silent auction was a great success. The live auction took place in the yoga room, where fast and furious bidding generated a lot of excitement. Megan Eklund gave a touching and inspiring speech about what it’s like to have cancer and how it has changed her life in many positive ways,” says Fritz. “And Center Director Dr. Fayez Ghishan spoke passionately about the continuing need to advance pediatric cancer research, and what’s currently taking place at the Steele Center. People were touched by both speakers.”

Another benefit from this year’s event was that title sponsor **EXG Investments** made a long-term commitment to RARK. “We really believe in Anne’s vision for supporting pediatric cancer research at the Steele Center to develop more effective chemotherapy treatments and eventually find a cure for pediatric cancer,” says **Travis Carson**, one of the five principals with EXG Investments.

“Mighty things from small beginnings grow,” wrote the English poet John Dryden, and this exemplifies the success of RARK 2005. “We are truly making a difference in pediatric cancer research,” says Fritz.



Megan Eklund with friends Danny and Brian.

How Cancer Changed the Direction of My Life—For Good!

By Megan Eklund

I am like many pediatric cancer patients. I still remember the exact moment I was diagnosed; I had a difficult and long treatment regimen, and share a bond with fellow cancer survivors like none I have ever known. There is one unique aspect to my story though: I developed a *pediatric* cancer at the age of 24.

In 2002, I graduated *magna cum laude* from the University of Wisconsin-La Crosse with a BS in Finance and Economics. I played varsity volleyball for four years. In the summer of 2004, I was ecstatic about starting the Master's in Finance program at The University of Arizona with the intent to pursue a doctoral degree. However, that all changed on July 29, 2004, when I was diagnosed with rhabdomyosarcoma—a pediatric soft-tissue cancer.

I underwent chemotherapy for a year and received radiation for a month, during which I was treated alongside newborns, young children and teenagers. I was struck by their resiliency. Despite being diagnosed with a life-

“My experiences have drastically changed my life and outlook. I've grown closer to the Lord, my family is stronger than ever, and I have an appreciation for the simple pleasures in life that is rare for someone my age.”

threatening illness and enduring horrendous side effects from treatment, each child found a way to be a kid. They could have their head in a bucket one minute and be riding their I.V. pole down the hall the next. Now some of my best friends are only 5 or 6 years old.

My experiences have drastically changed my life and outlook. I've grown closer to the Lord, my family is stronger than ever and I have an appreciation for the simple pleasures in life that is rare for someone my age. Because of my great affinity and admiration for my fellow bald buddies, I'm pursuing a career as a pediatric oncology nurse instead of returning to finance. I also have become involved with Raise a Racquet for Kids, a fundraising event for pediatric cancer research being conducted at the Steele Children's Research Center. The research focuses on developing a more effective, less toxic treatment for pediatric cancer. My involvement helps put a face on pediatric cancer and provides a voice for kids who can't represent themselves. I am so excited to use my experience in a positive way, both as a nurse and through Raise a Racquet for Kids.



PANDA Scholar Kim Gandy, MD, PhD:

A Passion for Pediatric Heart Disease

Through the generosity and commitment of our dedicated Phoenix Women's Advisory Board—affectionately known as the PANDAs (People Acting Now Discover Answers)—the Steele Center has recruited its newest PANDA Scholar. **Kim Gandy, MD, PhD**, is a new addition to the pediatric cardiothoracic surgery program at The University of Arizona and will conduct research through the Steele Center.

Dr. Gandy completed her general surgery and cardiothoracic residencies at Duke University and her pediatric cardiothoracic surgery fellowship at Stanford University.

Dr. Gandy's research interests focus on discovering ways to mend pediatric heart problems. She has two areas of research, one of which explores how transplanting bone marrow cells may repair a child's damaged heart muscle. “We have shown in a mouse model that infusion of whole bone marrow can rescue a type of congenital heart disease, thus providing a potential model for the rescue of hereditary heart disease in children,” says Dr. Gandy.

The second area of research focuses on making changes to an immune system so that a child who receives a transplant will not require immunosuppressant drugs. “This is accomplished through a process called hematopoietic reconstitution, which means that donor blood cells are transplanted into a recipient, and are accepted as native cells by the recipient,” explains Dr. Gandy. “Thus the immune system does not attack the transplanted cells, and makes the recipient more likely to accept an organ transplant.”



New Director of Development at the Steele Center

Monica Hardt-Delisa has been appointed Director of Development for the Steele Children's Research Center, where she will be responsible for managing and directing all development and fund-raising activities.

Monica earned a BS degree in Agriculture and an MA in Journalism—both from The University of Arizona. She began her career in development in 1989 with the UA College of Agriculture and became its Associate Director of Development in 1994. In 1995, she was named Director of Development for the UA College of Nursing and served in that capacity for five years. In 2003, Monica became the Director of Development for San Miguel High School.

"I look forward to returning to The University of Arizona and working with the outstanding faculty and staff of the Steele Children's Research Center as they strive to improve the health of our children," says Monica.

In her spare time she is one of the founders and directors of the Fall Fiesta Showcase Tournament (a college recruiting tournament for high school softball athletes), a member of the College of Agriculture and Life Sciences Alumni Board, and is an active volunteer with the Amateur Softball Association.



Volunteer Highlight: Richelle Litteer

Friendship Creates a Lasting Memorial

Richelle Litteer knows the true meaning of friendship. Richelle and Ann Courtney have been best friends for 13 years. When Ann's daughter—the beautiful 26-year-old Sara Courtney—unexpectedly passed away from complications of type 1 diabetes in 2003, Richelle sprang into action. "The death of a child is a parent's worst nightmare. The pain is just unimaginable. I wanted to do something for Ann to convey how much I love her and how important her friendship is. I also wanted to do something so that Sara would never be forgotten," says Richelle.

"I wanted to do something for Ann to convey how much I love her and how important her friendship is. I also wanted to do something so that Sara would never be forgotten."

Thus, in the midst of tremendous grief, sadness and mourning, Richelle came up with the idea of a walk and competitive run to honor Sara's memory and support her friend Ann. With the devoted assistance of Sara's countless friends and family, Richelle created a true labor of love and friendship: The **Sara Courtney Memorial Walk/Run**, affectionately known as **Sara's Walk**. **Sara's Walk** takes place on the Saturday before Mother's Day at beautiful Sabino Canyon—one of Sara's favorite places. Each year, more than 600 people walk or race to memorialize Sara and raise proceeds for type 1 diabetes research and education programs at the Steele Center.

Richelle is committed to the **Sara Courtney Memorial Walk/Run**. "We're going to do this every year so that Sara's sweet face is in the public eye, and her friends and family can come together to remember her, and at the same time raise money to help alleviate this hideous disease through medical research, discovery and education."



What's more, Richelle wants **Sara's Walk** to grow over the next few years. "I'd like to have additional activities take place after the race, include music, allow our sponsors to have tents and even offer breakfast. It will be a lot more work, but it will bring a lot more people and thus, could raise even more dollars. With all the support I get from my friends and Sara's, I know we can make it happen," she explains.

Richelle's selfless gesture of friendship has grown into a community-wide memorial to honor her best friend's daughter, and has enabled Steele Center investigators to research cures for diabetes, which plagues more than 1 million young people throughout the U.S.

"Sara was a sweet, generous and beautiful young woman. I will never let her be forgotten," Richelle promises.

The third annual **Sara Courtney Memorial Walk/Run** will be on Saturday, May 13, 2006. To learn more about the event, please visit www.walkforsara.com.

To learn more about the diabetes-related research that is being conducted at the Steele Center, visit www.steelecenter.arizona.edu/areas/endo.asp.

7th Annual 'Pediatrics in the Desert' Conference Hosts Sara Courtney Memorial Invited Lectureship

On Oct. 15, 2005, the Department of Pediatrics hosted its Seventh Annual **Pediatrics in the Desert** conference. This annual educational event gives health care providers up-to-date information on a variety of health care topics.

This year, the conference hosted a special event—the **Sara Courtney Memorial Invited Lectureship**. Sara lost her battle with juvenile diabetes in August 2003 (*see related story on page 10*). Memorial gifts made in Sara's honor went to support the memorial lectureship.

The invited lecturer was **Dennis Styne, MD**, the Rumsey Chair in Pediatric Endocrinology and Director of Pediatric Endocrinology at the University of California, Davis. "Dr. Styne gave a superb update on type I diabetes, and answered many questions afterward. His presentation was very informative and interesting," says **Sean Elliott, MD, Associate Professor of Clinical Pediatrics**. "I especially enjoyed hearing about the future of implantable insulin pumps and glucometers."



Dr. Sydney Rice, one of the conference presenters, with a young patient.

The fifty-seven participants also learned from lectures given by Department of Pediatrics faculty **Brent Barber, MD**, (Cardiology), **Mark Brown, MD**, (Pulmonology), **Mike Karadsheh, MD**, (Critical Care), **Sydney Rice, MD**, (Neurology and Behavioral Pediatrics), and **Fayez K. Ghishan, MD**, (Gastroenterology and Department Head).

Conference attendees included community pediatric and family practice physicians, nurses, nurse practitioners, pharmacists and school nurses. The conference attracted participants from all over Southwest Arizona.

The Department of Pediatrics Education Committee, led by Dr. Elliott, already is planning next year's event and hopes to recruit another fabulous line-up of academic faculty. "The Committee hopes to continue the new tradition of invited lectures in the field of juvenile diabetes," says Dr. Elliott.



The Steele Center Welcomes New Tucson Advisory Board Chair Andrew Norell

Andrew Norell has accepted the position of Chair for the Steele Center Tucson Advisory Board. "With Andy's energy, enthusiasm and commitment to children's health, I know he will do a great job leading our advisory board," says Faye K. Ghishan, MD, Director of the Steele Children's Research Center.

Andy has been an Advisory Board member since 2000, and is excited about the opportunity to lead. "In the five years that I have been on the Tucson Advisory Board, I have been very impressed by the people at the Steele Center and the work that they are doing. The Steele Center is a wonderful asset for Arizona and the southwest. As the Chair of the Advisory Board I am looking forward to working with the physicians, staff and the Board to help take the Steele Center to a new level of in terms of research and services."

Andy and his wife, Sylvia, have three children, Sarah, Caroline and Drew. He is an attorney with the law firm of Campbell, Yost, Clare & Norell., P.C. His law practice emphasizes health care through representation of hospitals and physician groups and physician/hospital organizations. Andy is very interested in children's health issues, and was one of the founders of Tu Nidito Children's Hospice.

New Faculty Join the Department of Pediatrics

The Department of Pediatrics welcomes the following new clinical and research faculty:

Samita Andreansky, PhD, joined the Section of Hematology/Oncology as a Research Assistant Professor. Dr. Andreansky is interested in heat shock proteins as vaccines in cancer and respiratory infections.

Michael Karadsheh, MD, joined the Section of Critical Care as an Assistant Professor of Clinical Care.

Sydney Rice, MD, MS, joined the Section of Developmental and Behavioral Pediatrics as an Assistant Professor of Clinical Care. Dr. Rice has clinical expertise in children with traumatic brain injuries and autism. Her research interests include outcome evaluation of treatments for children with disabilities.

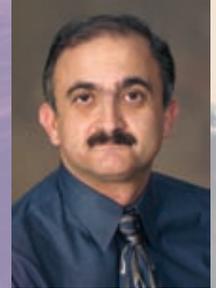
Elizabeth Berry Seelbach, MD, joined the Section of Hospital Medicine as an Assistant Professor of Clinical Care. Dr. Seelbach is interested in taking care of children with acute illness in the inpatient setting.

Brenda Wittman, MD, joined the Section of Hematology/Oncology as an Assistant Professor of Clinical Care. As a pediatric oncologist, Dr. Wittman's research interests included supportive care of children with cancer and the effects of obesity on survival and efficacy of chemotherapy.

Mona Zawaideh, MD, joined the Sections of Endocrinology and Nephrology as an Assistant Professor of Clinical Care. Dr. Zawaideh is the country's only pediatric nephrologist/endocrinologist.



Samita Andreansky, PhD



Michael Karadsheh, MD



Sydney Rice, MD, MS



Berry Seelbach, MD



Brenda Wittman, MD



Mona Zawaideh, MD

Faculty Highlights 2005

Critical Care

Robert A. Berg, MD, Professor of Pediatrics, was senior author on the landmark study that was published in JAMA, titled, "First Documented Rhythm and Clinical Outcome From In-Hospital Cardiac Arrest Among Children and Adults."

Gastroenterology

Fayez K. Ghishan, MD, Professor and Head, Department of Pediatrics; Director, Steele Children's Research Center, received an NIH grant to investigate novel therapies for Inflammatory Bowel Disease. Dr. Ghishan was visiting professor at Stanford, Washington University, University of Wisconsin, Emory, Vanderbilt, University of Virginia, Children's Hospital of Philadelphia (CHOP), to name a few. Dr. Ghishan is co-editor of the major textbook, *Physiology of the Gastrointestinal Tract, Fourth Edition* (March 2006 publication date).

Pawel, Kiela, PhD, Research Assistant Professor, was promoted to Research Associate Professor. Dr. Kiela received an NIH grant to investigate novel therapies for Inflammatory Bowel Disease.

General Pediatrics

Leslie Barton, MD, Professor, was awarded a grant from the Allergy and Immunology Foundation to bring Sami Bahna, MD, DrPH, from Louisiana State University Health Sciences Center, to present a Grand Rounds lecture on pediatric rheumatology.

Conrad Clemens, MD, Associate Professor of Clinical Pediatrics, was promoted to Section Head of General Pediatrics. Dr. Clemens was also awarded the "Furrow Award for Excellence in Graduate Medical Education Teaching."

Barry Seltz, MD, Clinical Assistant Professor, was promoted to Clinical Associate Professor. Dr. Seltz also received the "Dean's List for Excellence in Teaching in the Clinical Sciences Award."

Rodrigo Villar, MD, Assistant Professor of Clinical Pediatrics, was promoted to Associate Professor of Clinical Pediatrics.

Genetics

Randy Heidenreich, MD, Associate Professor, was promoted to Professor of Pediatrics with a joint promotion to Clinical Professor of Biochemistry and Molecular Biophysics.

Hematology/Oncology

Samita Andreansky, PhD, Research Assistant Professor, received a one-year Faculty Small Grant Program Award.

Emmanuel Katsanis, MD, Professor of Pediatrics, was promoted to Section Head of Hematology/Oncology. He was also appointed the Louise Thomas Endowed Chair for Pediatric Cancer Research.

Luke Whitesell, MD, Associate Professor, was accepted as a 2005-2006 fellow at the Radcliffe Institute for Advanced Study, Harvard University.

Infectious Disease

Sean Elliott, MD, Assistant Professor of Clinical Pediatrics, was promoted to Associate Professor of Clinical Pediatrics. Dr. Elliott also received the "Dean's List for Excellence in Teaching in the Clinical Sciences Award."

Ziad Shehab, MD, Professor, received the "Clinical Science Educator of the Year Lifetime Award."

Neonatology

Bohuslav Dvorak, PhD, Research Associate Professor, was appointed to the Dean's Research Council.

Jonathan Wispé, MD, Professor, received the "Longitudinal Clinical Curriculum Preceptor" Award.

Pharmacology/Toxicology

Leslie Boyer, MD, Associate Professor of Clinical Pediatrics, was awarded a 3-year ADCRC grant for \$540,000.

Pulmonary

Mark Brown, MD, Associate Professor of Clinical Pediatrics, was promoted to Professor of Clinical Pediatrics. Dr. Brown received the 2005 Chairman's Award from the American Lung Association of Arizona, awarded by the Board of Directors to the outstanding volunteer of the year.

Wayne Morgan, MD, Professor, received the "Year I Basic Science Educator of the Year Award."

University Center on Disabilities

Melinda Davis, MD, Research Instructor, was promoted to Research Assistant Professor.

Department of Pediatrics Faculty

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Clinical Pediatrics

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Professor

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Scott Klewer, MD

Associate Professor

Daniela Lax, MD

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Ricardo Samson, MD

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Assistant Professor
Clinical Pediatrics

Critical Care

Marc Berg, MD

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Clinical Pediatrics

Robert Berg, MD

Professor, Pediatrics

Juan Gutierrez, MD

Assistant Professor
Clinical Pediatrics

Michael Karadsheh, MD

Assistant Professor
Clinical Pediatrics

Robyn Meyer, MD

Assistant Professor
Clinical Pediatrics

Andreas Theodorou, MD

Professor
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Mark Witten, PhD

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Research Assistant Professor

Endocrinology

Mark Wheeler, MD

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Clinical Pediatrics

Mona Zawaideh, MD

Assistant Professor

Gastroenterology

Liqun Bai, MD

Research Assistant Professor

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Department Head

Hassan Hassan, MD

Associate Professor
Clinical Pediatrics

Pawel Kiela, PhD

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Hua Xu, PhD

Research Assistant Professor

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Professor

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Clinical Pediatrics

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Clinical Pediatrics

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Murray Brilliant, PhD

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Christopher Cunniff, MD

Professor

Robert Erickson, MD

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Research Assistant Professor

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Professor

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Clinical Pediatrics

Ziad Shehab, MD

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Clinical Pediatrics

Neonatology

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Mona Zawaideh, MD

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Clinical Pediatrics

Pharmacology/Toxicology

Leslie Boyer, MD

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Clinical Pediatrics

Pulmonary

Mark Brown, MD

Professor
Clinical Pediatrics

Theresa Guilbert, MD

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Fernando Martinez, MD

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Wayne Morgan, MD

Professor

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About the Cover:
Cover photo is Marianne Cracchiolo-Mago and her daughter Lila Grace. Marianne is the daughter of Dan Cracchiolo, president of the Steele Foundation. Marianne is a trustee of the Foundation, which donated \$2 million to help build the Steele Center and funded the Horace W. Steele Endowed Chair in Pediatric Research. Pictured above is Marianne, her husband, James Mago, and Lila Grace.

CREDITS:

Editor/Writer/Art Director

Darci Slaten, MA
Director of Communications

Editorial Board

George Humphrey, MA
Director, AHSC Office of Public Affairs

Ann Stevens
Manager of Special Programs

Contributing Writers

Bohvslav Dvorak, MD
Sean Elliott, MD
William Garver, PhD

Graphic Design

Roma Krebs
AHSC Biomedical Communications

Photography

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www.idopictures.com

Margaret Hartshorn
AHSC Biomedical Communications

Darci Slaten

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



2005 Fathers of the Year Awards Dinner and Gala: *Honoring Fathers and Supporting Diabetes Research*

More than 450 individuals gathered for the **2005 Fathers of the Year Awards Dinner and Gala** to honor six amazing Tucson fathers and raise money for juvenile diabetes research. The event raised a record-breaking \$160,000! The proceeds will fund three promising diabetes researchers at the Steele Center: **Gary Greenberg, PhD; Liqun Bai, MD; and Pawel Keila, PhD.** "The proceeds from the 2005 Fathers of the Year Awards exceeded my expectations. I am awed by the generosity of the Tucson community and proud that Father's Day Council Tucson continues to support the Steele Center's research to find a cure for juvenile diabetes," says FDC co-chair Susan Mannion.

*"Of all nature's gifts to the human race,
what is sweeter to a man than his children?"*

—Cicero

Mark Your Calendars! *Upcoming Events*

April 1, 2006

*"Children Helping Children"
PANDA Fashion Show (Phoenix)*

April 22, 2006

*Active Women's 20/30 Club
The Red Carpet Event*

May 13, 2006

Sara Courtney Memorial Walk/Run

June 3, 2006

*Father's Day Council Fathers
of the Year Dinner*

August 25, 2006

Tee Up For Tots Golf Tournament

For more information about these events,
please visit our Web site at www.steelecenter.arizona.edu.



Today's care...tomorrow's cures

*"The Steele Center investigators
continue to teach, to heal, and to
discover, in order to improve the
health of our precious children."*

Dr. Fayez K. Ghishan
Director, Steele Children's Research Center

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