



COLLEGE OF MEDICINE

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Steele Children's Research Center  
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# 2014 EVENTS

## FEBRUARY 1

Diamond Children's/Steele Center Gala  
JW Marriott Tucson Starr Pass Resort & Spa

## APRIL 12

PANDA 15th Annual  
"Children Helping Children"  
Fashion Show and Luncheon  
The Phoenician Resort, Scottsdale

## JUNE 13

Father's Day Council Tucson  
Father of the Year Awards Gala  
Loews Ventana Canyon Resort

## AUGUST 22

Tee Up For Tots Golf Tournament  
Omni Tucson National Resort

## OCTOBER 19

Kids of Steele Miniature Golf Tournament  
Golf N' Stuff

## STAY CONNECTED TO THE UA STEELE CENTER

Learn more about what's happening at  
the UA Steele Center through our website:  
[steelecenter.arizona.edu](http://steelecenter.arizona.edu)

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Our logo is an incomplete puzzle, with a child in the center. The pieces to the puzzle represent everyone who is integral to improving children's health...doctors, nurses, medical staff, researchers, families, volunteer groups, donors and others. We all can be a piece of the puzzle, working together to improve children's health. The puzzle isn't finished, because we can't do it without YOU. Thank you for your support! To learn more about the Steele Center, please visit [www.steelecenter.arizona.edu](http://www.steelecenter.arizona.edu).



# REVIEW 2013

# OUR JOURNEY

Joey, Courtney and Sicily Ingegneri

By Joey Ingegneri, III

*We are grateful to Joey, Courtney and Sicily Ingegneri for being our cover models for this year's annual review, and for sharing their story with us.*

**O**ur journey with the University of Arizona Medical Center actually began almost seventeen years ago. I was paralyzed in a roll-over car accident in 1997 and air-lifted to UAMC.

I was eighteen and Courtney was only sixteen, but even as teenagers we were in love and dreamed of having children one day. On a ventilator and unable to talk, I scribbled questions on a pad of paper. The first question I asked was if I would still be able to have children.

Seventeen years later, our dream of becoming parents became a reality in the same place where I first scribbled that question on a pad of paper.

After years of unsuccessful fertility treatments and multiple rounds of in-vitro fertilization, we finally learned we were pregnant in the spring of 2013! We were overjoyed.

The first few months of pregnancy went extremely well, until early August, when Courtney's water broke. She was only 20 weeks pregnant. The doctors gave us grim odds and advised Courtney to stay on bed-rest at home. They said if by some chance she could make it until 23 weeks, there would be hope for our baby to be viable. At that point we could be admitted to UAMC. Remarkably, we made it to 23 weeks and were admitted.

From the very beginning, we were amazed by the exceptional level of care we received. The odds were still stacked against us, but with each passing week the outlook became a little better. Despite the lack of amniotic fluid, our precious baby continued to fight, continued to grow and continued to beat the odds. For two-and-a-half months, Courtney was an inpatient at UAMC.

On October 28, 2013, our precious daughter, Sicily Elisabeth, was born nine weeks early by emergency C-section.

On a scale of 0 to 10, with 0 being dead, her initial rating was only a 1, but Sicily continued to fight. In the hands of the amazing NICU team at Diamond Children's, our daughter not only lived, but thrived.

Throughout our nearly five-month stay at UAMC and in the Diamond Children's NICU, we witnessed the incredible work the entire team does on a daily basis—from the doctors, nurses and medical staff, to the food service and housekeeping staff. Everyone was truly amazing.

We are beyond grateful for the loving care, personal touches and incredible friendships we made with everyone at UAMC and Diamond Children's. From the bottom of our hearts, **THANK YOU.**



## MESSAGE from the Director



*Dr. Ghishan with a few faculty and students he has mentored.*

Dear Friends,

At the UA Steele Children's Research Center, we continue in our unwavering commitment to improve children's health through research and discovery—and translating those discoveries in the lab to lifesaving treatments for our children.

Research is one of the many key differentiators of an academic medical center, like Diamond Children's. And training the next generation of researchers, through mentoring, is one of our top priorities. This is how we propagate knowledge and move medicine forward.

The UA Steele Center is dedicated to those we mentor, because they are our future researchers. They are the ones who will make new discoveries and develop better treatments to treat and cure the diseases that afflict our children.

UA Steele Center physician-scientists mentor high school students, undergraduate and graduate students, post-doc fellows and faculty. Here are just a few highlights:

- We received a five-year NIH research education grant enabling high school students from around Arizona to participate in the **"Summer Institute on Medical Ignorance."** This program provides students hands-on basic science research experience working as paid scientists with physicians and researchers throughout the UA College of Medicine – Tucson. Each student has a mentor in the lab, guiding his or her research project.
- **Claire Larmonier, PhD**, received a prestigious K01 "Mentored Research Scientist Development" award from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) to explore the role a protein plays in Inflammatory Bowel Disease. I have the honor, along with Dr. Pawel Kiela, to mentor Dr. Larmonier, and this grant provides an important stepping stone in her quest to acquire NIH grants in the future.
- **Katri Typpo, MD**, received a two-year grant from the National Institutes of Health Eunice Kennedy Shriver National Institute of Child Health and Human Development to investigate the best way to feed children during critical illness. (*See story, p. 16*)
- **Raji Ramalingam, PhD**, former Dorrance Fellow, is now a UA Steele Center associate researcher. She recently published her first study as a first author in the *The Journal of Immunology*, "Dendritic Cell-Specific Disruption of TGF- $\beta$  Receptor II Leads to Altered Regulatory T Cell Phenotype and Spontaneous Multiorgan Autoimmunity."
- Graduate student **Rita-Marie T. McFadden** is working on her dissertation, "The Role of Curcumin in Modulating Colonic Microbiota During Colon Cancer Prevention." Her research was accepted to the largest international conference, **Digestive Disease Week**, taking place in 2014, where she will give a lecture on her findings. This is a huge accomplishment!

In addition to mentoring the next generation of researchers, our faculty continues to acquire research grants, make medical discoveries and translate those discoveries to clinical care—to improve our patients' health. That's why we are here!

We are grateful to you, our supporters, for partnering with us as we move medicine forward through research and mentoring those who will make life-saving discoveries in the future.

In gratitude,

Faye K. Ghishan, MD  
Professor and Head, the University of Arizona Department of Pediatrics  
Director, UA Steele Children's Research Center  
Horace W. Steele Endowed Chair in Pediatric Research  
Physician-in-Chief, the University of Arizona Medical Center – Diamond Children's

# AMAZING GRACIE!



Left: Gracie with her mom, Lisa; Center: Gracie with her parents Lisa and Patrick, holding her Beads of Courage; Right: Gracie with her pediatric cardiologist Dr. Brent Barber.

Three-year-old **Gracie Robinson** lights up every room she enters. With her playful smile, cherub cheeks and bright blue eyes, Gracie captivates everyone she meets.

And this includes the doctors, nurses and staff at Diamond Children's, where she has spent much of her young life.

"Gracie has this light that beams forth from the depths of her heart and soul, and people notice her," said her mom, **Lisa**. "She is a ray of sunshine, and I know she was given to us for a reason."

Gracie was born with many complicated congenital heart problems.

She has ventricular inversion—where the right ventricle of her heart is on the left side, and her left ventricle is on the right side.

Gracie was also born with two holes in her heart (atrial septal defect and ventricular septal defect) and no pulmonary artery (pulmonary atresia). This caused serious disturbances in the normal flow of blood to her lungs and body and Gracie was blue (cyanotic) after birth and needed a series of complex heart surgeries.

Gracie's parents, **Lisa and Patrick Robinson**, have been with Gracie every step of this long and often painful journey.

"Gracie is the true definition of resilience," said Lisa. "Her doctors and nurses say she is so forgiving—especially after she's gone through painful pokes, traumatizing procedures or life-threatening surgeries."

Gracie had her first heart surgery when she was only one week old. Since then, she has had 11 major surgeries or procedures—including two additional heart surgeries, two lung surgeries, five heart catheterizations, to name a few.

After Gracie's first full-corrective heart surgery in May 2012, she suffered many unexpected complications and was hospitalized countless times through November 2012, including one stay lasting 79 days, following her first lung surgery. "Gracie has been hospitalized so much that everyone at Diamond Children's knows her by name," said Lisa.

A team of doctors, nurses, home-health providers and other medical specialists take care of Gracie. "Gracie's main doctor right now is her pediatric cardiologist **Dr. Brent Barber**, but all of the doctors, nurses and others work together to help Gracie's ongoing health issues," said Lisa.

"Gracie is a true star," said Dr. Barber. "She has endured many heart surgeries, procedures and blood draws during her three years, but has maintained a warm, magnetic presence and is known by nearly all of the nurses, doctors and staff. Her enduring personality gives much credit to her parents, Lisa and Patrick, who have maintained calm optimism throughout the prolonged hospitalizations and continued complex medication and feeding schedules. Go Gracie!"

Pediatric heart surgeon **Michael Teodori, MD**, professor and interim chief, Division of Cardiothoracic Surgery, Department of Surgery, performed Gracie's heart and lung surgeries. "Gracie would look at us with her big eyes wide open, and always empower us to help her, especially with loving care, when we struggled with the choices of her medical treatment," said Dr. Teodori.

"Dr. Teodori is an angel and a godsend," said Lisa. "He gave my daughter her life back and he's the reason she is still here. We will be forever grateful."

Gracie is far from being out of the woods. "There have been so many complications with Gracie, it seems like if something can go wrong with her body, it will," said Lisa.

Some of the complications Gracie has endured include pleural effusion (buildup of fluid in the lungs), and PLE (protein losing enteropathy)—an inability of the digestive tract to absorb proteins, causing an imbalance in her potassium, sodium and albumin levels. In addition, she was unable to feed well post-operatively and subsequently became malnourished, causing her immune system function and IgG (immunoglobulin G) production to decline. Gracie now has a feeding tube for supplemental calories to improve this condition.

To help resolve these complications, Gracie is taken care of by pediatric gastroenterologist **Fayez K. Ghishan, MD**, and pediatric allergist-immunologist **Michael Daines, MD**.

Gracie still has a long way to go on her journey to full health, but Lisa and her family are optimistic. "Even though this has been a very trying time for our family, I wouldn't change anything," said Lisa.

"Gracie is a firecracker and has the biggest heart of anyone I know. She truly is an inspiration."



Gracie with physician assistant Richard Burt and her surgeon Dr. Michael Teodori.

## Unexpected Discovery Leads to **INSIGHT** for Dry Eye Disease

Sometimes, research takes you down unexpected paths, leading to unexpected discoveries. UA Steele Center director **Fayez K. Ghishan, MD**, and researcher **Hua Xu, PhD**, associate professor of pediatrics, made yet another unexpected discovery into the role of NHE8—a sodium/hydrogen exchanger protein.

NHEs are a group of membrane proteins that function to exchange extracellular sodium (Na+) for intracellular hydrogen (H+). NHE proteins contribute to many physiological functions, such as intracellular (within cells) acidic (pH) regulation, cell volume regulation, and sodium absorption. They play an important role by transporting sodium and electrolytes through the gastrointestinal tract.

Previously, Drs. Ghishan and Xu discovered that NHE8 plays a role in mucosal protection in the intestinal tract and in male reproduction. "When we removed NHE8 in mice, we observed that they developed gastric ulcerations, became more susceptible to infections, and the male mice became sterile," said Dr. Ghishan.



From left: Dr. Xu, Dr. Wang and Dr. Ghishan

"And now, we have discovered that mice lacking NHE8 expression also develop dry eye disease," said Dr. Xu.

Dry eye disease (DED) is a very common eye disease, especially in Arizona, due to low humidity and high temperatures. Individuals with DED have symptoms of discomfort, visual disturbance and even loss of vision. DED affects millions of people and costs billions to treat.

Drs. Ghishan and Xu have been collaborating with physician-scientist **Mingwu Wang, MD, PhD**, associate professor, UA Department of

Ophthalmology and Vision Science. As an expert in treating dry-eye patients, Dr. Wang helped characterize dry-eye symptoms in NHE8-deficient mice.

"The cause for DED has remained largely unknown," said Dr. Xu. "We believe this striking discovery will lead us to understand the mechanism that causes dry eye disease, and we hope to discover and develop new treatment strategies to treat this very common disease."

The results of the research will be published in 2014.

# 'Magic Carpet Ride' Gala an **INSPIRING** Night



The 2014 Diamond Children's/Steele Center "Magic Carpet Ride" Gala was such a wonderful way to start this new year!

The event took place Feb. 1 at the JW Marriott Starr Pass Resort. It was a beautiful, fun-filled and meaningful evening, with approximately 500 people attending.

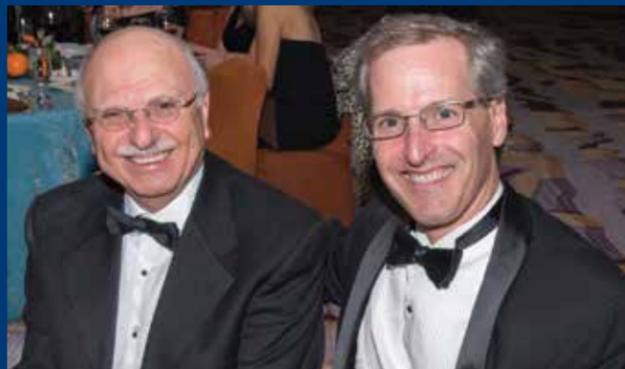
Participants enjoyed silent and live auctions, wonderful food and drinks, dancers and live music by The Walkens. The evening was emceed by **Amy Miller**, mother of a patient and wife of UA men's basketball coach **Sean Miller**.

One of the evening's highlight's was the uplifting music video that featured rock band **American Authors**, patients, doctors, nurses, residents, hospital administrators and staff. The video can be viewed online at [www.steelecenter.arizona.edu](http://www.steelecenter.arizona.edu).

Another high point was the stirring speech delivered by 15-year-old patient, **Austin Thacker**, who is battling stage 4 non-Hodgkin's Lymphoma. Austin's speech received a standing ovation.

Funds raised from the gala will fund autoimmune disorders research at the UA Steele Center and clinical programs at Diamond Children's.

We are grateful for everyone who volunteered their time to make this event a huge success, and for those of you who attended to support Diamond Children's and the UA Steele Center. Thank you!



# IN MY OWN WORDS Austin Thacker, 15



Excerpts from Austin's speech given at the Diamond Children's/Steele Center Gala

said, "It's going to be okay, we'll take this day by day." He walked to my room and called for help. My mom ran in and found Matt had passed out. When he woke up he told us, "I'm sorry, it's just my brother!" I told Matt, "It's going to be okay."

When I got the news about having cancer, I had no reaction, no feeling or comments. It could have been strength or it could have been ignorance.

I had to begin chemotherapy but they couldn't do it through an IV, and a port wasn't an option since the tumor was next to my heart. The next best thing was a "PIC line." I was awake for it, since it was a huge risk for anesthesia to be given to me because of the chance my lungs might collapse. The PIC line was the most pain I've ever endured. They first tried my right arm. I cried and cried. The doctor told me if I cried it would make my veins narrower. I tried as hard as I could. When it was all over, he had to pull it out and try again. He missed where it was supposed to go so he tried again. The PIC line simply wasn't possible.

After about a month in the hospital, they believed it was safe enough for me to go home for a week or two. It only took a few days until I returned with C Diff (a GI bacterial infection) and extreme dehydration. I couldn't sleep, I couldn't eat and I was on morphine. After about three sleepless nights, I finally slept



Austin with his brothers Matt, 17, and Colton, 8.

some, but began to hallucinate. One I remember, the walls yelled at me saying the word over and over again. "CANCER, CANCER." The walls screamed at me to kill myself. I walked to the bathroom still hooked up to everything, my nose tubes, my midline and I fell to the floor. I woke up with nurses and my mom worried sick. The first thing I said was, "I'm ALIVE." The dream felt so real.

I was sleep-deprived. My blood pressure couldn't be controlled, so they sent me to the ICU. There were more hallucinations. The C Diff took me from 118 pounds to 88 pounds in a few weeks. I was too weak to walk.

After the ICU, I began to recover. Because of the C Diff, my lower intestine became more sensitive to the chemo. I bent down in pain a lot, so when I walked I had an arch in my back. My stance and appearance were bad. I began to have panic attacks and anxiety constantly, followed by nights where I couldn't sleep. The doctors said this is normal—"Post

**O**n April 10, 2013, my mom received a call from our doctor that they found a mass in my chest. She squeezed my hand so tight, you could just feel her worry. She squeezed my hand for dear life as if I was a precious jewel. I knew something was wrong before she told me. A thousand words were told in that single action.

**O**n April 12, I was diagnosed with Stage 4, non-Hodgkin's Lymphoma.

When we arrived at Diamonds Children's, my mom started tearing up. I told her, "Mom, it's going to be alright." Right then, my dad busted through the door and gave me a big hug. I met Dr. Kopp and she told us that the mass was next to my heart, placing pressure on an artery. More tests were needed.

A biopsy was done on my head because there were bumps and the doctors assumed they were the same as the mass in my chest. These bumps probably saved my life, because we wanted these checked from the beginning. The two bumps tested were positive for lymphoma.

Dr. Kopp told me that the bumps on my head and the mass in my chest were all lymphoma, including some other growing tumors in my lungs, spine, ribs and kidneys. This meant stage 4 cancer. When we got the news, my older brother Matt

Traumatic Stress Disorder." Some nights I would just sit in bed and burst into tears.

After cancer, you feel like a lot of things in society are pointless. Things society says you need, like being good-looking, having the best clothes, owning the newest and latest gadgets to make your life better. They just seem pointless. What I feel is most important is my family and my own bed to sleep in.

### My own bed....

At the end of October, I finished chemo and was in remission. I remember the happiness I felt when I was going to begin school. I was starting to grow hair. It took me a few weeks to realize that I could take a breath.

**Then, in November I had a check-up.** The results showed the cancer was back.

After all that chemo, the cancer had returned. My wonderful Dr. Kopp told me she was sorry. I said, "Why are you sorry? It's not your fault."

There was a lot of pain knowing that after I had just taken a breath, I would have to hold my breath a second time.

The option now is a bone marrow transplant. My big brother Matt is a perfect match for me.

Some people say the news of getting cancer is life-changing. With the experiences I've been through and all the wisdom I've gained, **I'm pretty happy I got cancer because if I never had, I wouldn't have the outlook on life that I do now.** I believe wisdom comes with experience. I'm really glad that God has given me this experience to grow and to learn.

God is still with me. The bell just rang to announce "round two." My hands are still up, and I say let the fight continue. I may have a few scratches, but that won't stop me.

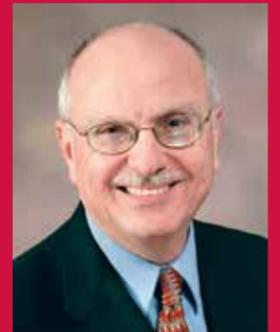
**I'm Austin Thacker, and I'm going to fight the fight.**

**Dr. Fayez K. Ghishan**  
First Pediatric Gastroenterologist

**AWARDED**

'Horace W. Davenport  
Distinguished Lectureship'

**U**A Steele Center director, **Fayez K. Ghishan, MD,** was the first pediatric gastroenterologist ever to be awarded the **Horace W. Davenport Distinguished Lectureship.**

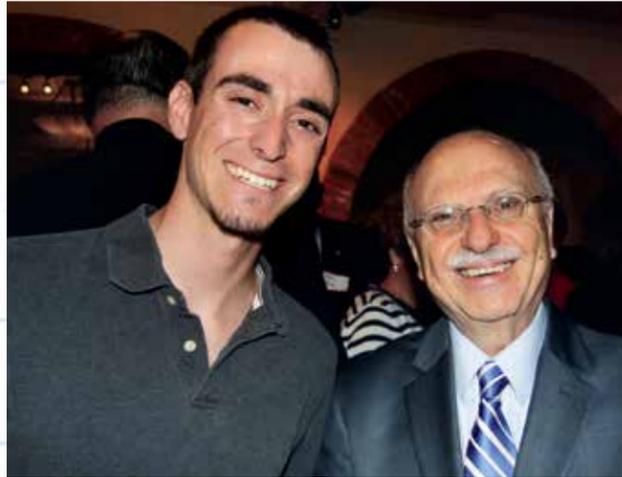


This honor is the most prestigious recognition by the **Gastrointestinal & Liver Section of the American Physiological Society (APS).**

The award recognizes distinguished lifetime achievement in gastrointestinal and liver physiological research, and accomplishments in teaching, training and activities within APS.

"Dr. Ghishan's research has certainly done this," said **Pradeep K. Dudeja**, GI-liver section of the American Physiological Society. "There is so much appreciation for the influence Dr. Ghishan has had on the field through his teaching and training activities. Moreover, Dr. Ghishan has given the field a number of great scientists, and we are grateful for all he has accomplished."

## TRAVIS BOSWELL: Why I Joined the UA Steele Center Advisory Board



*I joined the advisory board for one simple reason: to give back.*

Having been a patient of Dr. Ghishan's when I was a child, and having benefited from the UA Steele Center's research, I can confidently say that the UA Steele Center has played a vital role in allowing me to become the driven, successful (so far) individual I am today.

If I could give one child the opportunity I was given, I would do it in a heartbeat. Because of the UA Steele Center, I have been given that opportunity and I hope to do with it as much as I can.



Dr. Ghishan, center; from left: Raji Ramalingam, PhD; Claire Larmonier, PhD; Daniel Laubitz, PhD; Vijay Radhakrishnan, PhD; Pawel Kiela, DVM, PhD; Monica Midura-Kiela, MS; Rita-Marie T. McFadden, BS.

## We WELCOME New Advisory Board Members and New Chair



UA Steele Center  
advisory board chair  
Peggy Rowley.

The UA Steele Center welcomed nine new advisory board members in 2013:

- **Travis Boswell:** UA student, majoring in visual communication with an emphasis in illustration
- **Mary Drachman:** (previously) teacher, Tanque Verde School District; (currently) sales, Drachman Insurance Services
- **Cathy Hutchens:** (previously) manufacturing management, Leoni Wiring Systems; (currently) community volunteer
- **Czarina Lopez:** secretary treasurer, HSL Properties, Inc.; community volunteer
- **Susan Mahoney:** gifted education, State Board of Education
- **John Payne:** president, chief investment officer, Sterling Investment Management, Inc.; owner, manager, Sentinel Pass Capital Management, LLC
- **Nancy Quebedeaux-Faulkner, RN, BSN, CIC:** Perioperative Services Quality Management Lead, Ascension Carondelet St. Joseph's Hospital
- **Jeff Ronstadt:** president, Ronstadt Insurance
- **Mick Rusing:** trial lawyer, founding partner, Rusing, Lopez & Lizardi

In addition, long-time advisory board member **Peggy Rowley** was named new chair. "The energy radiating from this year's advisory board is palpable," said Rowley. "We want everyone to know about the UA Steele Center. Why? Because without research, we can't cure children's disease and illness."

The purpose of the Steele Center advisory board is to actively support the center through creating community awareness, providing financial assistance and participating in fundraising events.

## DISCOVERY Leads to New Understanding of Proteins' Role in IBD-related Bone Mineral Density Loss

Each year, more than 30,000 children are diagnosed with Inflammatory Bowel Disease (IBD), a painful gastrointestinal disorder. IBD is a chronic inflammation of the intestinal tract that causes fatigue, diarrhea, abdominal pain and weight loss.

The two most common forms of IBD are Crohn's disease and ulcerative colitis. They usually strike children and young adults between the ages of 10-19.

A common complication of IBD is loss of bone mineral density. Consequently, individuals with IBD have been estimated to have a 40 percent higher risk than the general population of developing osteopenia or osteoporosis later in life.

Recently, UA Steele Center researchers discovered that two proteins play a key role in IBD-related inflammation and subsequent bone mineral loss.

The research was led by Steele Center director **Fayez K. Ghishan, MD**, professor and department head; **Pawel Kiela, DVM, PhD**, associate professor; and **Vijayababu "Vijay" Marati Radhakrishnan, PhD**, assistant scientist.

Their findings were published in the prestigious journal, *Gastroenterology*.

Other contributors to the study included **Rajalakshmy "Raji" Ramalingam, PhD**; **Claire Larmonier, PhD**; **Robert Thurston, BS**; **Daniel Laubitz, PhD**; **Monica Midura-Kiela, MS**; **Rita-Marie T. McFadden, BS**; and **Makoto Kuro-O, PhD**.

The paper, "Post-translational loss of renal TRPV5 calcium channel expression, Ca(2+) wasting, and bone loss in

*experimental colitis*," showed that the kidneys of patients with Inflammatory Bowel Disease produce less of the protein Klotho, which in turn leads to reduced levels of the calcium-absorbing protein TRPV5 in the kidneys, causing calcium loss in urine.

This mechanism likely contributes to the imbalance of calcium and to IBD-associated loss of bone mineral density.

"This study is a paradigm shift in our understanding of bone calcium metabolism in IBD," said Dr. Ghishan. "Whereas in the past, the belief was that the higher risk of bone fractures from osteopenia or osteoporosis was related to vitamin D deficiency, we now know that isn't necessarily the case," Dr. Ghishan explained. "We have discovered that it is the inflammatory mediators that cause calcium loss in the kidneys, which is connected to decreased amounts of Klotho and TRPV5 proteins produced in the kidneys."

"Our bodies are designed to maintain a steady concentration of calcium in blood, and limited intestinal absorption and renal reabsorption creates an imbalance, which may lead to resorption of bone—the main calcium depot," said Dr. Kiela. "Identifying Klotho and TRPV5 as key players in inflammation-induced calcium loss is of profound basic and clinical importance."

The results of this study point to the possibility that the Klotho protein one day could be used as supplemental therapy to treat IBD patients with osteopenia and osteoporosis.

"Our findings increase our understanding of bone loss in IBD and will help advance the care for IBD patients, because we now know what causes it," said Dr. Radhakrishnan.

# GRATEFUL!

## Kids of Steele Making a Difference

Now in their third year, **Kids of Steele** continue to make a positive impact in our community. We're grateful—and impressed!

In January, University of Arizona football Coach **Rich Rodriguez** and his family chose Kids of Steele as their personal charity of choice. "My family and I are excited to help children through Kids of Steele," said Coach Rodriguez. They plan to participate in upcoming Kids of Steele fundraising activities and service events.

And twice a month, Kids of Steele provided snacks for patients being treated at the Angel Wing for Children with Diabetes and the UAMC Pediatric Hematology-Oncology outpatient clinic.

Kids of Steele attended the UA football scrimmage game in the spring and coordinated a "meet and greet" with Coach Rodriguez and patient families.

In May, they held a toy drive at La Encantada and collected hundreds of toys and gift cards to donate to patients. Members of the UA football team volunteered along with Kids of Steele, and had a great time.

"The toy drive was a huge success that brought many of our member children to help other children," said **Adrienne Foust**, executive board member of Kids of Steele. "It was heartwarming to see children bringing toys for kids in the hospital. Several children shopped inside Mildred & Dildred, where they purchased items they thought other children might enjoy."

The Kids of Steele Third Annual Miniature Golf Tournament took place in November and was a huge success. They raised the most ever—\$36,000. The funds will be used for "greatest need" projects at the UA Steele Center and Kids of Steele service projects.

And in December, they organized a "Christmas Stocking" service project and stuffed 150 stockings for hospitalized patients at Diamond Children's and outpatient clinics.

"Kids of Steele has become an important supporter of the Steele Center through our service projects and fundraising efforts—raising more than \$100,000 in three short years," said **Ragan Edwards**, chair of Kids of Steele. "We have a strong membership comprised of families who are teaching their children the value of giving to others in their time of need. It means so much to watch my own children in their development truly take this message to heart, and 2014 will only be bigger and better with the number of families we are able to reach!"

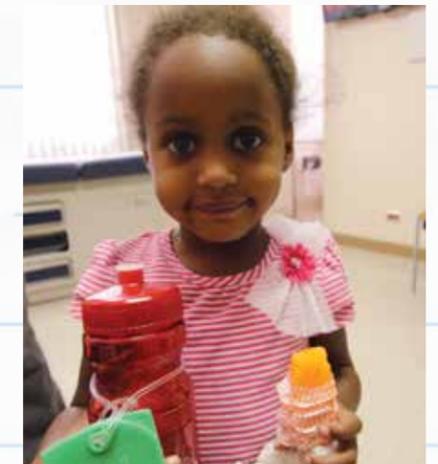
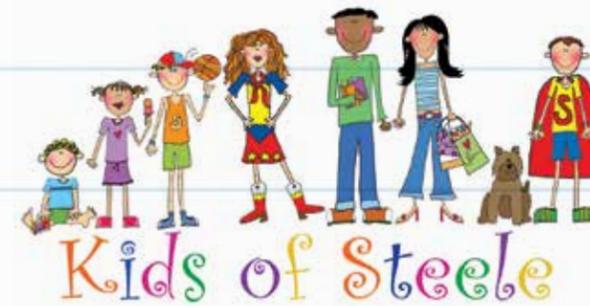


### *Kids of Steele Superhero Members (\$500)*

Deron and Cecie Davenport  
Jay and Adrienne Foust  
Eric and Shirley Geile  
Matthew and Jennifer Horn  
Justin and Wendy Hughes  
Anthony and Katherine Milo  
Gerald and Rebecca Sundt  
John and Kelly Wild

### *Kids of Steele All-Star Members (\$250)*

Louis and Amber Breton  
Craig and Ragan Edwards  
Robert and Jessica Huber  
Albin and Kristen Littell  
Miguel and Lucinda Peralta  
Jeffrey and Tiana Ronstadt  
Christopher and Anne Rounds  
Joshua and Heather Walsh  
Kenneth Morris and Nicole Zuckerman-Morris



# 19th Annual **FATHER OF THE YEAR**

## Awards Dinner and Gala

Father's Day Council Tucson celebrated five outstanding Tucson fathers at its 19th annual "Father of the Year Awards Dinner and Gala," June 14 at Loews Ventana Canyon Resort.



The event raised approximately \$100,000 for type 1 diabetes research, clinical programs, faculty recruitment and the **Father's Day Council Tucson Endowed Chair for Type 1 Diabetes** at the UA Steele Center.

"Father's Day Council honors great fathers that make a difference in the lives of their families and the Tucson community," said **Lee Shaw**, the group's executive board chair for 2013. "This year, we had another inspiring selection of fantastic fathers and stewards of our community along with our first 'Military Father of the Year.'"

This year's honorees were:

- **Tech Sgt. Chad Brady**, U.S. Air Force, Davis-Monthan AFB
- **Stephen G. Eggen**, retired chief financial officer, Raytheon Missile Systems
- **Tom Firth**, co-owner, Zona 78; managing partner, Hacienda Del Sol
- **Michael Hammond**, president, managing shareholder, PICOR Commercial Real Estate Services
- **Jon Volpe**, chairman and chief executive officer, Nova Financial & Investment Corporation

Father's Day Council of Tucson has raised nearly \$3 million for the UA Steele Center over the years.

"My wife and I have seen many positive changes occur over the past 14 years with our daughter, Olivia, who was diagnosed with type 1 diabetes when she was two," said Shaw. "When you have a child with type 1 diabetes, you are able to fully appreciate the impact that Dr. Ghishan, his researchers at the Steele Center, and staff at The Angel Wing for Children with Diabetes have made on the thousands of patients and their families that they have so wonderfully cared for and educated."

"We are so grateful for Father's Day Council Tucson," said **Dr. Ghishan**. "Their support enables us to advance our type 1 diabetes research, clinical programs and endowment."



# Research Aims to **IMPROVE NUTRITION** for Critically Ill Children

**W**hen infants and children are critically ill, maintaining their nutritional needs while hospitalized plays a vital role in their overall recovery and outcome.

And yet, there no solid data exists regarding the best way to feed critically ill children.

“There are significant gaps in knowledge regarding timing, route, dose and type of nutritional support needed for critically ill infants and children,” said pediatric intensivist **Katri Typpo, MD**, assistant professor, Division of Critical Care.

To bridge this gap, Dr. Typpo received a two-year NIH grant that seeks to discover the best way to feed children during critical illness.

The study is titled, “Supplemental Parenteral Nutrition in Pediatric Respiratory Failure,” or “The Supper Study,” for short.

It is the first randomized trial of IV nutrition (known as TPN, or total parenteral nutrition) for pediatric critical illness.

“Nutrition affects everything in critical care,” said Dr. Typpo. “It affects wound healing, the child’s ability to recover, his or her likelihood of getting another infection while in the ICU and even long-term neurological development.”

“Currently, nutrition for critically ill children involves feeding them through the GI tract, known as enteral nutrition,” said Dr. Typpo. “And then, late into their illness, if they fail to tolerate food and nutrition, we add IV nutrition.” This method is based on research that showed critically ill adults benefit from IV nutrition only late in the course of their illness.

“Where do older infants and children who are critically ill fit into this?” Dr. Typpo asked.

“It’s problematic to apply adult data to children because children have ongoing neurologic growth and development,” she said. “It’s more likely that critically ill infants and children are more like premature infants who need early IV nutrition, because of their ongoing neurologic growth and development.”

Dr. Typpo’s research hypothesizes that optimized early protein and calorie

delivery will improve a child’s nutritional and long-term neuro-developmental outcomes after critical illness.

“We expect to improve our understanding of optimal timing for TPN support during pediatric critical illness,” said Dr. Typpo. “An improved understanding of the best delivery of nutritional support and the interaction between route and dose of TPN and enteral nutrition potentially can reduce morbidity due to pediatric critical illness, an outcome with lifelong impact.”

The study randomizes critically ill children hospitalized in the PICU at Diamond Children’s.

Children enrolled in the study will receive early IV nutrition (within 24 hours of being admitted) or late IV nutrition, which is added to supplement enteral nutrition after five days, which is the current standard of care.

A metabolic cart measures the exact caloric needs of each child. “Calorie requirements vary widely with children,” said Dr. Typpo. “By using the metabolic cart, we can determine how many calories each child uses. It’s as important to avoid too much nutrition as it is to avoid malnutrition,” she explained.

The study will enroll approximately 40 patients over the next two years. “Our goal is to expand the study to children’s hospitals throughout the U.S.,” said Dr. Typpo.

“We believe the data will show that even a brief lack of nutrition may significantly impact a child’s neurological development,” explained Dr. Typpo. “Based on our findings, our hope is to develop evidence-based best practices to supply critically ill infants and children with the correct amount of nutrition they need, ensuring the best outcomes.”

*Dr. Typpo uses a metabolic cart to measure a patient’s caloric expenditure and needs.*



## **ANGEL CHARITY** Funding Supports Pediatric Cancer Research and Clinical Trials

**T**he UA Steele Center was named a 2013 beneficiary of **Angel Charity for Children, Inc.**

The UA Steele Center received \$537,230 at the annual **Angel Ball** held Dec. 14 at the Westin La Paloma.

This funding will enable the UA Steele Center to increase the number of clinical trials for pediatric cancer patients and expand its basic science pediatric cancer research.

“We are profoundly grateful to Angel Charity for this gift,” said **Dr. Ghishan**, “We will be able to significantly increase the number of clinical trials available to our children suffering from cancer.”

Each year, approximately 65 children with cancer and blood disorders are cared for by UA Steele Center physician-scientists at Diamond Children’s and its affiliated outpatient pediatric cancer clinic. In

addition to children in active treatment, long-term care and follow up is provided for hundreds more.

“When our son, Andres, was diagnosed with a rare form of cancer, we were fortunate to live in Tucson, where we had top-notch care,” said Andres’ mom, **Lucinda Peralta**. “We know that research led to a cure for our son. The support that Angel Charity brings to the Steele Center will help other families achieve a cancer-free future as well.”

One of the most promising research projects under way at the UA Steele Center is a pediatric cancer vaccine. Given in doses created from a child’s own cancer cells, this vaccine is predicted to prevent cancer recurrence.

“In most cancers, we can induce cancer remission. If the cancer returns, the chance of survival decreases

exponentially,” said pediatric oncologist **Emmanuel Katsanis, MD**, professor and division chief of pediatric hematology/oncology/BMT and director of the Blood and Marrow Transplantation Program at the UA Cancer Center. “Angel Charity’s grant will propel pediatric cancer research forward. We are all excited to move basic and translational cancer research at the Steele Center to the highest level.”



*Pictured above: Dr. Katsanis with members from Angel Charity for Children, Inc.*





# PANDA

Receives Grant to Support 'PANDA Share a Hug' Program

In May, the men's **Scottsdale Active 20/30 Club** awarded a \$10,000 grant to the PANDAs to support the "PANDA Share a Hug" program. This program enabled PANDA to purchase more than 1,000 stuffed panda bears to be given to pediatric patients.

"Children love stuffed animals, and these pandas will make patients feel better and put a smile on their faces," said **Lori Stratton**, director of development for the UA Steele Center.

"We are so grateful to the men's Scottsdale Active 20/30 Club for this very generous donation," said **Emily Calihan**, president of PANDA.



From left: Heather Walsh (UA Steele Center), Emily Calihan (PANDA), Jenn Karas (PANDA), Geri Farr (PANDA), Bobby Raines (Scottsdale Active 20/30 Club)



# PANDA

'Under the Big Top' Event Funds Children's Autoimmune Disorders Project

The 14th annual PANDA "Children Helping Children" Fashion Show and Luncheon held at The Phoenician in Scottsdale on May 11, raised \$475,000 for the UA Steele Center.

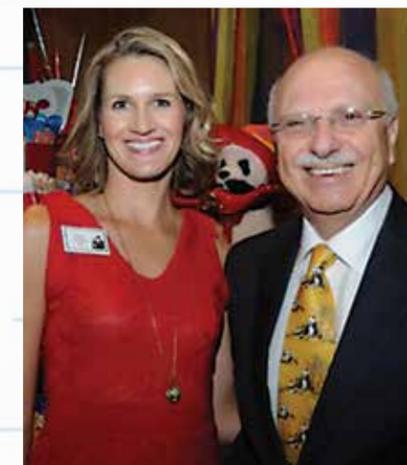
The event is organized by PANDA (People Acting Now Discover Answers)—the Phoenix Women's Board of the Steele Center. The board's mission is to support discovery processes that lead to improved treatments and cures for devastating childhood diseases.

The proceeds will fund the **PANDA Children's Autoimmune Disorders Project** at the UA Steele Center, enabling researchers to expand basic science research in autoimmune diseases like type 1 diabetes, rheumatoid arthritis, inflammatory bowel disease, Crohn's disease and celiac disease, to name a few.

"Prevalence and incidence of autoimmune diseases like type 1 diabetes and Crohn's disease are on the rise, and the mechanism underlying this increase is not well known," said **Dr. Ghishan**. "We suspect that both genetic and environmental factors contribute to the cause of autoimmune diseases. With PANDA's support, we hope to make new discoveries that will lead to the development of novel therapies for these complex and perplexing disorders."



"As president, it was an honor to work with the dedicated PANDA board members in creating our own 'circus,'" said **Emily Calihan**, PANDA president. "Our event was a huge success with more than 900 guests and 64 young models that shined on the runway—all to support the Steele Center and the PANDA Autoimmune Disorders Project."





# 15th Annual **TEE UP FOR TOTS** Golf Tournament Supports Pediatric Cancer Research

The 15th annual **Tee Up For Tots** golf tournament raised approximately \$90,000 for its “Family Support Program” and pediatric cancer research at the UA Steele Center.

The event took place at the Omni Tucson National Resort & Spa and included breakfast, a 19th hole luncheon and an awards ceremony.

A special tribute was held for Dave Sitton, who was the master of ceremonies for the fundraiser every year since its beginning. Sitton died unexpectedly on August 12.

**Jerry Zillman** and **Kathy Zillman** founded Tee Up For Tots in 1999, to honor their daughter, Courtney Page Zillman, who passed away from neuroblastoma on November 25, 1999. She was only four years old. Neuroblastoma is a cancer that develops in the nerve tissue. It most commonly affects children five or younger.

Since the devastating loss of their daughter, the Zillmans have supported the UA Steele Center and created the “**Courtney Page Zillman Fellowship**,” which supports a promising young graduate student for two years to conduct pediatric cancer research at the UA Steele Center. They have raised more than \$1 million for pediatric cancer research conducted by UA Steele Center researchers over the past 15 years.

One area of research that has been supported by Tee Up For Tots is the development of cancer immunotherapies—treatment utilizing one’s immune system to help fight cancer. Led by UA Steele Center researcher **Emmanuel Katsanis, MD**, professor and director of the Blood and Marrow Transplantation Program at the UA Cancer Center, Dr. Katsanis and his team have worked for more than 15 years developing promising new therapies that are nearing clinical trials.

“We’re so grateful to Tee Up For Tots for their continuing support of our pediatric cancer research,” said Dr. Katsanis. “Their support enables us to move research forward, which is the only way we can develop new treatments for cancer.”



## In Memory of Our Friend **DAVE SITTON**

On August 12, 2013, we were saddened to learn that **Dave Sitton** passed away from an apparent heart attack at age 58.

Dave was well-known throughout Tucson as the upbeat and award-winning “Voice of the Wildcats” for UA baseball, basketball and football games. He was a UA rugby coach, congressional candidate and cancer survivor, to name just a few of his many accomplishments.

To us, Dave was our beloved friend and a passionate supporter of the UA Steele Center’s research aimed to improve children’s

health. He knew the importance of research and loved talking about the work we do to help kids.

For years, Dave participated in the **Tee Up For Tots Golf Tournament** and the **Father’s Day Council Tucson “Father of the Year Awards”** that benefited pediatric cancer and type 1 diabetes research at the UA Steele Center.

“Dave was one of the most wonderful human beings I’ve ever met,” said **Dr. Ghishan**. “He was so devoted to this community and to improving the lives of children. We miss him dearly.”



*UA Steele Center Director Faye K. Ghishan, MD, holds check donated by AEMP; also pictured are Peggy Rowley, UA Steele Center advisory board chair, and Al Skorupski, Arizona Elks Major Projects executive director.*

## A Commitment to Giving: **ARIZONA ELKS MAJOR PROJECTS**



Donate \$125,000 to the UA Steele Center

At the December advisory board meeting, **Al Skorupski**, executive director of the **Arizona Elks Major Projects**, presented a check for \$125,000 to UA Steele Center Director **Faye K. Ghishan, MD**.

This was their second \$125,000 gift of the year, totaling \$250,000.

This donation is part of the Elks’ commitment to raise \$2.5 million for the UA Steele Center over the next 10 years.

Since 1991, the Elks have raised more than \$5 million for the UA Steele Center. They have supported basic

science research, education and clinical programs.

“We are so grateful for the Elks’ continued support,” said Dr. Ghishan. “They are truly our partners in improving children’s health, and we could not move forward without them.”

The Elks have committed to supporting the following research areas and programs:

- Basic science research in autoimmune diseases such as type 1 diabetes, multiple sclerosis, inflammatory bowel disease and celiac disease

- Establishing the UA Steele Center in Phoenix
- Establishing the Arizona Elks Endowed Chair in Statewide Pediatric Research

“The 30,000 individuals who are members of the Arizona Elks Association are proud to support the Steele Center’s efforts to improve children’s health,” said **Skorupski**. “Establishing the Steele Center in Phoenix, supporting research and creating a new endowed chair are important steps to help children in Arizona who are struggling with illness and disease.”



From left: Rincon Optimist Club President Mick Gent; UA Steele Center annual giving coordinator Laura Hopkins; UA Steele Center director, Dr. Ghishan.

## POSITIVE IMPACT:

### The Rincon Optimist Club of Tucson

More than 2,600 Optimist Clubs around the world are dedicated to "Bringing Out the Best in Kids." This is accomplished by adult volunteers who participate in a variety of service projects in their communities aimed at helping children.

And the Rincon Optimist Club of Tucson is no exception.

For the past two years, the Rincon Optimists have committed to helping children with cancer by supporting the pediatric cancer research at the UA Steele Center.

In 2013, the Steele Center received \$2,000 from the Rincon Optimist Club and an additional matching donation of \$1,000 from Optimist International for a total donation of \$3,000. On Nov. 3, **Mick Gent**, president of the Rincon Optimists, presented the check to **Dr. Ghishan** and **Laura Hopkins**, coordinator of annual giving.

"Optimist International has a program where they give additional funding to any Optimist Club that raises funds for children's cancer," said Gent. "We learned about the pediatric cancer research being

done at the Steele Center and decided we would raise money for their program."

They raised the funds through their second annual "Casino Night" event, held at the 49er's Golf and Country Club.

"We are so thankful for the Optimists' support," said Dr. Ghishan. "Every single donation is appreciated and furthers our ability to conduct life-saving research."

"Our goal is to continue raising funds for the Steele Center's pediatric cancer research program," said Gent. "We are now working to find a major sponsor and increase our contributions to the Steele Center in future years."

We're inspired by the Rincon Optimist's positive commitment to helping our children with cancer. Thank you, Rincon Optimist Club of Tucson!



Larry, with his donation at the Kids of Steele toy drive, is joined by members of the UA football team who volunteered that day. Team members, from left: Jake Fischer, Shaquille Richardson, Richard Morrison (white shirt), Jake Smith, BJ Denker, Fabbians Ebbele.

## LARRY RONSTADT

### Donates Birthday Toys to Fellow Patients

In May, **Kids of Steele** held a drive at La Encantada to collect toys and gift cards to give to children hospitalized at Diamond Children's and those receiving treatments at the University of Arizona Medical Cancer pediatric outpatient clinics.

**Larry Ronstadt** knows from experience how receiving toys while hospitalized can brighten one's day.

Diagnosed with acute lymphoblastic leukemia (ALL), in December 2011, Larry has been hospitalized numerous times at Diamond Children's and has received ongoing outpatient care at the pediatric hematology-oncology clinic.

As Larry's 9th birthday approached, he and his mom, **Tiana Ronstadt**, talked about all he has and how much he's received.

"Larry told me, 'For my birthday, I want my friends to bring gifts for the kids at Diamond Children's. I loved getting something when I was there and would like to do that for

someone else.' So, Larry asked his friends to bring gifts to give to children coping with illness," said Tiana.

Tiana and Larry explored options for donating his birthday gifts, and Larry chose Kids of Steele because they were holding a toy drive the same day as his birthday, May 18, and the Ronstadt family had participated in other events that supported Kids of Steele in the past.

After his birthday party, Tiana and Larry drove the gifts to the toy drive. When they arrived, Larry was greeted by players from the UA football team who were volunteering. They thanked Larry for his generous donation. "The players were friendly and gracious," said Tiana. "Larry had fun interacting with them."

"At first I was nervous to deliver the gifts," said Larry. "But then I felt great and happy."

We feel happy, too, for Larry's act of generosity!



**Dr. Wayne Morgan**  
 Receives the Richard C. Talamo Distinguished Clinical  
**ACHIEVEMENT AWARD**  
 from the Cystic Fibrosis Foundation

**Wayne Morgan, MD**, professor of pediatrics and physiology, division chief of Pediatric Pulmonary, Allergy and Immunology, UA Department of Pediatrics, received the prestigious “**Richard C. Talamo Distinguished Clinical Achievement Award**,” at the 27th Annual North American Cystic Fibrosis Conference on Oct. 17, in Salt Lake City.

This award is given to individuals who have spent their careers in the research and care of patients with cystic fibrosis and whose contributions have had significant influence on the course of the disease.

“This is the most prestigious award given by the Cystic Fibrosis Foundation to a clinician,” said **Michele Murphy**, executive director of the Cystic Fibrosis Foundation, Southern Arizona. “We are very proud and grateful for the care provided by Dr. Morgan and his team.”

For more than 35 years, Dr. Morgan has provided clinical care to children with cystic fibrosis and other pulmonary diseases. He is also a faculty member of the UA Pediatric Pulmonary Center (PPC)—a program funded by a grant from the Maternal and Child Health Bureau.

An internationally-acclaimed physician-scientist with the UA Steele Center, Dr. Morgan’s research interests include asthma, cystic fibrosis and sleep medicine.

He has chaired the Epidemiologic Study of Cystic Fibrosis (ESCF), and has made major contributions to our understanding of cystic fibrosis and its care. Dr. Morgan is also the Chair of the National Cystic Fibrosis Foundation Data Safety Monitoring board, which oversees safety and quality.

**COMING SOON:**

UA Steele Children’s  
 Research Center in Phoenix

**W**e are officially in the renovation stage at our new Phoenix office, 4455 E. Camelback Road, Suite E-135.

“We anticipate renovations being completed sometime in the Spring of 2014,” said **Heather Walsh**, associate director of development, Phoenix.

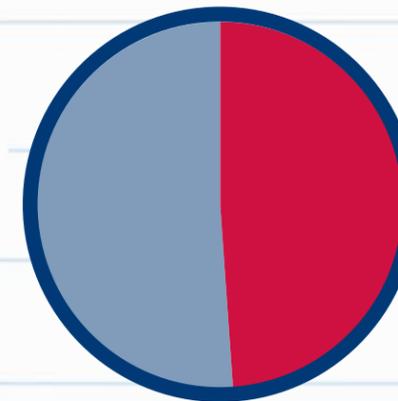
“We’re excited to expand to Phoenix, where we will begin conducting clinical research studies in collaboration with children’s hospitals in Maricopa County,” said **Dr. Ghishan**. “We are especially grateful to our PANDAs and the Arizona Elks for their support, which has made this expansion possible.”

The first UA Steele Center clinical research projects will be in the areas of necrotizing enterocolitis, autism, and type 1 diabetes.



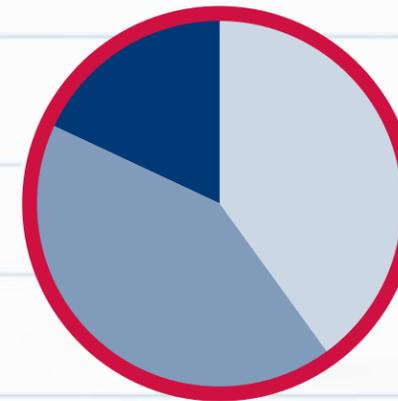
FY 2012-13  
**FACTS & FIGURES**

Total amount raised: \$1,635,131



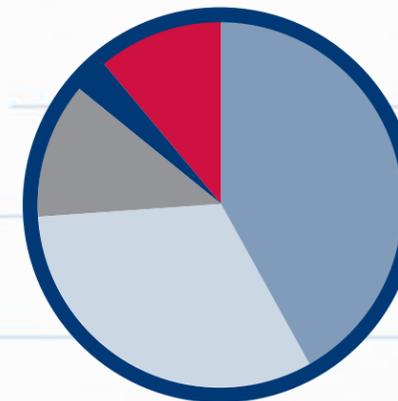
**Types of Donations:**

- Donations raised from events: 49%
- Direct donations: 51%



**Types of Donors:**

- Individual: 40%
- Foundations: 42%
- Corporations: 18%

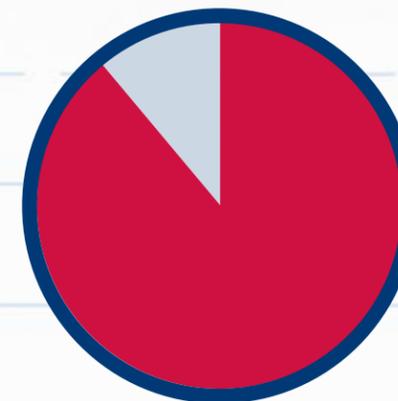


**FY 12-13  
 Where Philanthropy  
 Funds were directed**

- Research: 42%
- Endowment: 32%
- Recruitment: 12%
- Clinical support: 3%
- Annual fund/greatest need: 11%

**FY 11-12  
 How Philanthropy  
 Funds were Used**

- Teaching, healing, discovering: 89%
- Administrative and fundraising: 11%



**THANK YOU**  
 for your support!

**W**e thank you for your investment in the UA Steele Center and children’s health!

Federal and state grants help fund scientific investigation, but philanthropy is an important catalyst for nurturing new ideas because it serves as a springboard for securing government aid in the future.

UA Steele Center physician-scientists focus on investigating the causes of pediatric diseases and work to discover new treatments and therapies for children suffering with illness.

What’s more, UA Steele Center physician-scientists take care of children throughout Arizona and neighboring states, focusing primarily on difficult-to-treat diseases like pediatric cancers, type 1 diabetes, autism spectrum disorders, congenital heart disease and gastrointestinal disorders, such as Crohn’s disease and eosinophilic esophagitis.

# THANK YOU!

We appreciate **every gift** made to the UA Steele Children's Research Center. **It is the kindness and generosity of our donors that allow us to provide today's care and tomorrow's cures to children throughout Arizona.** We want to give special thanks to the following donors who gave \$1,000 or more from January through December 2013.

## \$250,000+

Arizona Elks Major Projects  
PANDA - Phoenix Women's Board

## \$100,000 - \$249,999

Cowin Charitable Fund  
Father's Day Council Tucson  
The Steele Foundation, Inc.

## \$50,000 - \$99,999

Anonymous  
Armstrong McDonald Foundation  
Jim and Vicki Click  
The Dorrance Family Foundation  
I. Michael and Beth Kasser

## \$24,999 - \$49,999

Fraternal Order of Eagles  
Gifts in Honor of Stephen Eggen—  
Father of the Year 2013  
Gifts in Honor of Tom Firth—  
Father of the Year 2013

## \$15,000 - \$24,999

Forward Progress Enterprises  
Anthony and Katherine Milo  
Raytheon Company  
Gifts in Honor of Michael Hammond—  
Father of the Year 2013  
Gifts in Honor of Jon Volpe—  
Father of the Year 2013

## \$10,000 - \$14,999

Arizona Cardinals Football Club  
Geneva Fund  
Jasam Foundation  
Nordstrom  
Nova Home Loans  
Michael and Carol Parker  
Robert and Gabrielle Rife  
James and Nancy Rodolph Charitable Fund  
Scottsdale Active 20/30 Foundation Inc.

## \$5,000 - \$9,999

Kym Adair  
Lawrence and Wendy Aldrich  
Arizona Community Foundation  
Mark and Jennifer Dioguardi  
Bennett and Jacquie Dorrance  
DMB Associates  
John and Geri Farr  
Fay Street Investments, LLC  
Thomas and Susan Firth  
Larry Fitzgerald Jr.  
DeeAnne Gibbons  
Lisa Helt  
Matthew and Jennifer Horn  
Thomas and Ruth Ann Hornaday  
William and Kimberly Jacobsen  
Linda Kaplan  
D. Faye Morse  
Wilfred and Ingrid Nuhsbaum

## PICOR Commercial Real Estate Services

Jon and Peggy Rowley  
Frank and Lisa Soares  
Leroy and Ruth V. Thon  
Jon and Tammy Underwood  
Greg and Julie Vogel  
Christopher and Helen Yeung

## \$2,500 - \$4,999

Bashas' Markets, Inc.  
BBVA Compass  
Wendy Beninato  
Michael and Robyn DeBell  
Mark and Shelly Detmer  
Russell and Erika Dickey  
Bijen Dyrek  
Ali Farhang  
Fidelity National Title Agency  
Marc and Debra Fleischman  
Greg and Katie Gale  
Herbert Goldberg  
Karin Hilsabeck  
Gregory and Christi Hraskey  
Jim Boyle Dairy  
Chris and Jennifer Karas  
Jonathan and Jennifer Kaye  
Sage and Wendy Lentz  
Daniel and Amy Mahoney  
Mid First Bank  
David and Traci Moser  
John and Caroline Musil  
Phoenix Suns Charities, Inc.  
Estate of Evelyn Pozez  
Rincon Optimists Club of Tucson  
Larry and Susan Ring  
Thomas Rogers and Ginny Clements  
Tom and Kelly Ross  
William and Sarah Slessman  
Leslie and Susannah Small  
Stewart Title & Trust  
Students Supporting  
Brain Tumor Research  
Marci Symington  
E. Thomas and Laura Thilman  
Benjamin and Carolyn Thomas  
Touchstone Foundation  
Tucson Electric Power  
Michael and Susan Wissink  
Charles and Suanne Woo  
Anthony and Eileen Yeung  
Richard and Victoria York

## \$1,000 - \$2,499

Ben and Christine Aguilera  
Sara Alcock  
Alliance Orthopedics LLC  
Anonymous (4)  
Ara Parseghian  
Medical Research Foundation  
Walter and Lew Armer  
Joseph and Tiffany Barry  
Thomas and Charlotte Bell

## Bigfish Creative Group, LLC

Anthony and Jayne Bongiovanni  
Todd and Lisa Borowsky  
Louis and Amber Breton  
Mark Brown  
Donald and Leslie Budinger  
Daniel and Emily Calihan  
Peter and Mary Calihan  
Molly Carson  
Casey's Children  
CBRE  
Centurytel, Inc.  
Casey and Lauren Charpio  
Todd and Katherine Chester  
Bettina Chow  
Casey and Kyle Christensen  
Thomas and Muffie Churchill  
John and Carol Clements  
Leo and Donna Connolly  
Aaron and Carrie Cook  
Paula Cook  
Cox Communications, Inc  
Deron and Cecie Davenport  
Jamie Davis  
Delta Delta Delta/Tucson  
Alumnae Chapter  
Diamond Ventures, Inc.  
Michael and Josephine Dickens  
Sharane Dorrah  
Robert and Amy Draper  
Gary and Suellen Edens  
Charles and Jennifer Ellis  
El Rio Santa Cruz  
Neighborhood Health Center, Inc.  
Bruce and Micheline Etkin  
Court and Meghan Fable  
Father's Day/Mother's Day Council  
Jan Paul and Diane Fincham  
Richard and Nanci Fink  
Peter and Anne Firth  
Lisa Foster  
John and Louise Francesconi  
Bernadette Franco  
John and Teresa Frevola  
David and Jennifer Gaona  
Bonsal and Alexis Glascock  
Golden Eagle Distributors  
Maurice R. & Meta G.  
Gross Foundation  
John and Melinda Gulick  
Larry and Penny Gunning  
Ralph and Maxine Henig  
Tom and Sandy Hobbs  
Aaron Hofer  
Jim Click Nissan, Inc.  
Dan Kamrath  
Thomas and Yvette Katsenes  
Philip and Jane Lacovara  
Greg and Jacque Linaman  
Dan and Susan Mahoney  
Gary and Andrea Malis  
Clementa Manerelli and Gary Molenda

## J. Dennis and Georgianna Mariani

William and Nancy McGibbon  
Michael and Eileen Romer McGrath  
Merrill Lynch  
Mesch, Clark & Rothschild, P.C.  
Christopher and Abbie Milisci  
Dolores Miller Charitable Endowment  
Kevin and Kelly Miller  
David and Melissa Mullard  
LaRee Murphy  
Patrick and Shannon Murphy  
Muscle Milk  
Gary and Trinkka Napp  
North Scottsdale Dermatology  
Kellie Parker  
Pastor La Sota Consulting, LLC  
Lawrence Pike  
Christopher and Kathleen Piller  
Brett and Larissa Polachek  
Chris Porter  
Presidio School  
Conrad and Julie Prusak  
Ben and Tiffany Quayle  
Mike and Jordan Ragland  
William and Natalie Rinehart  
Eric and Lori Risser  
Thomas and Tara Ritchie  
Roberts & Associates, PLLC  
Rosenberg Media, LLC  
Rothrock Building & Remodeling  
Royal Automotive Group  
Alissa Sanchez  
Santorini Homes, Inc  
Shadi Sarraf  
Kelly and Amanda Schnepf  
Scott and Beth Seldin  
Ryan and Gretchen Schubert  
William and Judith Schubert  
Stephen and Charlotte Scott  
Melissa Shafer  
Ziad and Leila Shehab  
Simply Bits, LLC  
Bud and Margo Smith  
The Sonntag Family Foundation  
Ted and Kathleen Spicuzza  
Ryan and Kristi Spiekerman  
Andreas and Maria Theodorou  
The Thunderbird Youth Fund  
Michael and Kristen Vanderwey  
Jon and Heather Volpe  
John and Anna Vyborny  
Nancy Walker  
Michael and Cynthia Watts  
Carol Williams  
WillPower  
Chris and Lori Xeller

# NEW FACULTY

The Department of Pediatrics  
Welcomed these Faculty in 2013



**Mridula Aggarwal, MD**  
Clinical Assistant Professor  
Division of Hospital Medicine



**John D. Feerick, MD**  
Assistant Professor  
Division of Gastroenterology and Nutrition



**Andrea Hobson, MD**  
Clinical Assistant Professor  
Division of Neonatology



**Ann Juodakis, MD**  
Clinical Assistant Professor  
Division of Hospital Medicine



**Sofia Khera, MD**  
Assistant Professor  
Division of Hospital Medicine



**Claire Larmonier, PhD**  
Assistant Professor  
Division of Gastroenterology and Nutrition



**Janet Lau, MD**  
Assistant Professor  
Division of Hospital Medicine



**Stephen Metz, MD**  
Clinical Assistant Professor  
Division of Hospital Medicine



**Marie Olson, MD, FACEP**  
Assistant Professor  
Division of Hospital Medicine



**Jeffrey Rein, MD**  
Clinical Assistant Professor  
Division of Hospital Medicine



**Michael Seckeler, MD, MSc**  
Assistant Professor  
Division of Cardiology



**Lesta Whalen, MD**  
Assistant Professor  
Division of Critical Care

**Alan Bedrick, MD**, professor, Division of Neonatology; received the “Distinguished Alumni Award” from Penn State University—the highest award bestowed by Penn State upon an outstanding alumna or alumnus. Serves on the Board of NeoReviewPlus, a publication of the American Academy of Pediatrics; serves on Board of Directors for the Arizona Perinatal Trust.

**Chris Cunniff, MD**, professor, Division of Genetics; invited speaker at American Academy of Pediatrics National Conference and Exhibition in Orlando, Florida, on October 27-28; presented a “Meet the Expert” session, “My patient is developmentally delayed. What tests do I order?” Publications: Oral corticosteroids and delayed onset of cardiomyopathy in boys with Duchenne muscular dystrophy. *Journal of Pediatrics*, 2013;163:1080-1084. Potential impact of DSM-5 criteria on autism spectrum disorder (ASD) prevalence estimates. *JAMA Psychiatry*, published online January 22, 2014. doi:10.1001/jamapsychiatry.2013.3893.

**Sean Elliott, MD**, associate professor, Division of Infectious Diseases; received the “Leonard Tow Humanism in Medicine Award” from the Arnold P. Gold Foundation; inducted into the Gold Humanism Honor Society; University of Arizona nominee for Alpha Omega Alpha Robert J. Glaser Distinguished Teaching Award; featured on PBS Frontline, “Hunting the Nightmare Bacteria”; featured panelist on “Consider This” moderated by Antonio Mora, Al Jazeera America.

**Fayez K. Ghishan, MD**, professor and department head, Division of Gastroenterology and Nutrition; received the “Horace W. Davenport Distinguished Lectureship” by the Gastrointestinal & Liver Section of the American Physiological Society. Grants: NIH, K01, DK099268-01. The pathogenic role of poly (ADP-ribose) polymerase 1 (PARP-1) in experimental colitis. (July 1, 2013 – July 31, 2017). Nutritional Support and Intestinal Barrier Function in Critically Ill Infants and Children (January 1, 2013 – December 31, 2014). Publications: Cortactin is Overexpressed in Colon Cancer and is Dephosphorylated by Curcumin: Involvement of Non-Receptor Type 1 Protein Tyrosine Phosphatase (PTPN1). *PLoS One*. Jan 22;9(1):e85796. Reduced colonic microbial diversity is associated with colitis in NHE3-deficient mice. *American Journal of Physiology - Gastrointestinal and Liver Physiology*. Nov. 2013;305(10):G667-77. Post-translational loss of renal TRPV5 calcium channel expression, Ca2+ wasting, and bone loss in experimental colitis. *Gastroenterology*, 2013;145(3):613-624.

**Aileen Har, MD**, assistant professor, Division of Gastroenterology and Nutrition; Publications: Eosinophilic Esophagitis. *Esophageal and Gastric Disorders in Infancy and Childhood, 1st ED*. January 2013. Quality of life in pediatric patients with unremitting constipation pre and post Malone Antegrade Continence Enema (MACE) procedure. *Journal of Pediatric Surgery*, 2013 Aug; 48(8):1733-7.

**Emmanuel Katsanis, MD**, professor and division chief, Division of Hematology, Oncology and BMT; Grant: Angel Charity for Children, Inc. grant to increase oncology clinical trials (\$537,230). Publications: Prolonged remission of advanced bronchoalveolar adenocarcinoma in a dog treated with autologous, tumor-derived chaperone-rich cell lysate (CRCL) vaccine. *International Journal of Hyperthermia*. 2013 Aug; 29(5):390-8. Epub 2013 Jun 20. PMID: 23786302. The “peptidome” of tumor-derived chaperone-rich cell lysate (CRCL) reveals potential antigens that stimulate tumor immunity. *International Journal of Hyperthermia*. 2013 Aug;29(5):380-9. Epub 2013 May 31. PMID: 23725202. Dendritic Cells for Cancer Immunotherapy. In Danquah M.K., Mahato R.I. ed., *Emerging Trends in Cell and Gene Therapy* 2013. Springer Science, New York, NY. 251-270.

**Scott Klewer, MD**, professor and division chief, Division of Cardiology; named to the Peggy M. Barrett Endowed Chair for Congenital Heart Disease, appointed Division Chief of Pediatric Cardiology, and was appointed to the national medical advisory board for the Adult Congenital Heart Association (ACHA).

**Lisa Kopp, DO**, assistant professor, Division of Hematology, Oncology and BMT; Grant: Hyundai Scholar Grant from Hyundai Hope on Wheels for \$75,000, “Experimental reduced intensity haploidentical hematopoietic stem cell transplant (HSCT) for pediatric solid tumors.” Publications: Decitabine has a biphasic effect on natural killer cell viability, phenotype,

and function under proliferative conditions. *Molecular Immunology*. 2013 Jul;54(3-4):296-301. Epub 2013 Jan 16. Small cell carcinoma of the ovary of the hypercalcemic type presenting in a 5-year-old girl. *Journal of Pediatric Hematology Oncology*. 2013 Jul;35(5):e217-8.

**Claire Larmonier, PhD**, assistant professor, Division of Gastroenterology and Nutrition; Grant: K01 Mentored Research Scientist Development, 4-year grant from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), “The pathogenic role of poly (ADP-ribose) polymerase 1 (PARP-1) in experimental colitis” (\$459,406). Publications: High Vitamin D diet administered during active colitis negatively affects bone metabolism in adoptive T-cell transfer model. 2013. *American Journal of Physiology, Gastrointestinal and Liver Physiology*. 304 (1): G35-46; Reduced colonic microbial diversity is associated with colitis in NHE3-deficient mice. 2013. *American Journal of Physiology, Gastrointestinal and Liver Physiology*. 305(10):G667-77.

**Nicolas Larmonier, PhD**, associate professor, Division of Hematology, Oncology and BMT; Publications: Dendritic cell tumor killing activity and its potential applications in cancer immunotherapy. *Critical Review in Immunology*. 33 (1): 1-21. 2013. Doxorubicin eliminates myeloid-derived suppressor cells and enhances the efficacy of adoptive T cell transfer in breast cancer. *Cancer Research*. 74(1): 104-118. The multifaceted role of Th-17 lymphocytes and their associated

cytokines in cancer. *Clinical and Developmental Immunology*. 2013: 957878, 1-11.

**Daniela Lax, MD**, associate professor, Division of Cardiology; appointed to a national American Society of Echocardiography (ASE) committee.

**William Marshall Jr., MD**, professor, Division of General Pediatrics; Publication: Incompetent. *Pediatrics*, 13:290-1, July-August 2013.

**John Meaney, PhD**, lecturer, Division of University Center on Disabilities, Section of Genetics Division of Genetics; Publications: Predictors of ascertainment of autism spectrum disorders across nine U.S. communities. *Journal of Autism and Developmental Disorders*, 43(8):1867-1879, 2013. Correlates of care for young men with Duchenne and Becker muscular dystrophy. *Muscle and Nerve*, 49(1):21-25, 2014 [published online September 11, 2013].

**Michael Seckeler, MD, MSc**, assistant professor, Division of Cardiovascular Disease in the Young, Early Career Investigator Award” from the American Heart Association for his project, “Development and Validation of an Accurate Predictive Equation for Oxygen Consumption in Congenital Heart Disease.” Publications: Patients with single ventricle anatomy may respond better to octreotide therapy for chylothorax after congenital heart surgery. *Journal of Cardiac Surgery*. 2013 Dec 4. doi: 10.1111/jocs.12263. [Epub ahead of print]. Feasibility of

pulse oximetry screening for critical congenital heart disease at 2643-foot elevation. *Pediatric Cardiology*. 2013 Dec;34(8):1803-7.

**Yi Zeng, MD, PhD**, assistant professor, Division of Hematology, Oncology and BMT; Grants: University of Arizona Foundation Faculty Seed Grant, “Improving the Outcome of Haploidentical BMT with Activated Th1 cells” (\$10,000); American Cancer Society Institutional Research Grant, “Targeting p21 Activated Kinases for Lymphoma” (\$15,000); NIH University of Rochester, “Spore in Lymphoma Administrative CORE Career Development” (\$35,000); Arizona Cancer Center IRG Pilot Award, “P21 activated kinase 2 (Pak 2)” (\$7,000). Publication: Normal hematopoiesis and neurofibromin-deficient myeloproliferative disease require Erk. *Journal of Clinical Investigation*. 2013 Jan 2;123(1): 329-34.

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