

SARVER HEART CENTER

A publication from The University of Arizona College of Medicine Newsletter Issue 50 • Winter 2007/08

Gordon A. Ewy, MD Honored as the College of Medicine's 2007 Founders Day Speaker

The College of Medicine Faculty Science Forum Founders Day Award recognizes and honors faculty for their scientific accomplishments. Sarver Heart Center Director Gordon A. Ewy, MD was selected as the recipient of this year's award and gave the Faculty Science Forum Founders Day Lecture during a ceremony on November 9.

Dr. Ewy joined the UA faculty in 1969 and has been present for the graduation of every UA College of Medicine medical student since. For this reason, he considered it a special pleasure and a great honor to be chosen as the 2007 Founders Day speaker.

In his Founders Day presentation, "Staying Alive," Dr. Ewy spoke about the importance of research and education

in his academic career. The work conducted by the Sarver Heart Center Resuscitation Research Group, which he started, has resulted in Continuous-Chest-Compression CPR, a sim-

pler and more effective resuscitation method for lay individuals, and in improved approaches for paramedics and firefighters that have dramatically increased survival rates after out-of-hospital cardiac arrest.

He said, "I feel very fortunate about the opportunity to make a difference not only in the lives of the patients that I have seen personally, but also in the innumerable lives saved as a result of our research."

Dr. Ewy also was a founding faculty member of what is now University Medical Center. When the hospital opened its doors in November 1971, he was here as a cardiologist and the first director of the cardiac catheterization laboratory. "And," he adds, "I still have a key to the front door!" He has been integral to the development of the clinical programs that have resulted in the Cardiovascular Services

at UMC being ranked among the Best Hospitals in America for cardiovascular services by *U.S. News & World Report* over the past several years. ♥



I feel very fortunate about the opportunity to make a difference ... in the innumerable lives saved as a result of our research."

— GORDON A. EWY, MD

Happy New Year!



8 Bob and Madeline Lamb chose a way of supporting the Sarver Heart Center that generates income for them



9 A cardiac arrest survivor learns "Sarver CPR" from the firefighters who saved his life

10 Young Sarver Heart Center investigators honored for projects that make a difference



...from the Director

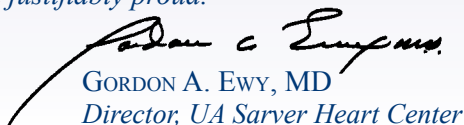
One of the many issues Sarver Heart Center physicians and scientists continue to focus on is out-of-hospital sudden cardiac death – the leading cause of premature death in all industrialized nations of the world.



Martha Lochert

Tremendous strides have been made with your support, as shown by the two most recent examples. As many of you know, we have been advocating Continuous-Chest-Compression CPR (CCC CPR) for witnessed unexpected collapse for years. In 2005, the American Heart Association (AHA) changed their guidelines for bystander CPR to 30 chest compressions for every 2 ventilations (formerly 15:2), based on the increasing data that more chest compressions are essential for neurologically normal survival. Given that the change was based on consensus of their committee rather than firm scientific data, we thought it important to compare the survival rates of CCC CPR to those of 30:2 CPR. We submitted two grant requests to investigate this question. Both were turned down. Therefore, we performed this critically important study in our out-of-hospital cardiac arrest swine model with gifts to the Sarver Heart Center designated to our resuscitation research. Our results were recently published in the prestigious medical journal, *Circulation*. We found that neurologically normal survival was higher with CCC CPR than with 30:2 CPR.

This important study is a critical link in a chain of evidence that will eventually lead to a change in AHA guidelines. The AHA will eventually recommend “Hands-on CPR” for lay people helping cardiac arrest victims. This change will, in my opinion, result in the saving of countless lives of individuals with cardiac arrest, as more bystanders will be willing to perform Continuous-Chest-Compression CPR. Your support in making this change has been essential and you should feel justifiably proud.


GORDON A. EWY, MD
Director, UA Sarver Heart Center

Resuscitating CPR Worldwide

This fall was a busy time for the resuscitation researchers at the Sarver Heart Center. In addition to writing and submitting several medical articles describing the exciting results obtained by paramedics and fire departments who have embraced Cardiocerebral Resuscitation here in the United States, several members of our Resuscitation Research Group traveled the world to present their findings.

BRAZIL



Karl B. Kern, MD, accepted an invitation to be a keynote speaker at the International Symposium on Medical Simulation held at Anhembi Morumbi University in Sao Paulo, Brazil. He presented studies by the Sarver Heart Center Resuscitation Research Group, during which volunteers performed CPR on mannequins in simulated CPR scenarios. The results from that research later led to clinical studies that have saved lives.

The UA Sarver Heart Center Newsletter is published three times a year in Spring, Fall and Winter. News reporters are welcome to quote from newsletter articles and are asked to provide credit. Correspondence or inquiries should be addressed to: UA Sarver Heart Center, Public Affairs, PO Box 245046, Tucson, AZ, 85724-5046. All contents © 2007 Arizona Board of Regents. The University of Arizona is an EEO/AA - M/W/D/V Employer. Please visit the UA Sarver Heart Center online: www.heart.arizona.edu

UA Sarver Heart Center Director Gordon A. Ewy, MD
Co-Directors Jack G. Copeland, MD
Carol Gregorio, PhD

Director of Development Clint McCall (520) 626-4146 or (800) 665-2328
Director of Communications Daniel Stolte (520) 626-4083, stolte@email.arizona.edu
Additional Writing Clint McCall
Design / Production AHSC Biomedical Communications

JAPAN, ITALY

Sarver Heart Center Director **Gordon A. Ewy, MD** gave a formal presentation on the new bystander and paramedic protocols for CPR to cardiologists from Japan and other countries attending the 55th Annual Japanese College of Cardiology meeting in Tokyo. He also met with colleagues from Tokyo and Osaka interested in helping to disseminate Cardiocerebral Resuscitation in the Far East. “It was a unique and interesting experience to visit the Tokyo fire department control center,” says Dr. Ewy. “On average, they respond to 27 cardiac arrests every day!” In October, he presented “Cardiocerebral Resuscitation” at an International European Cardiology Conference in Venice. In the meantime,



Charles Otto, MD lectured on the same topic at the American Society of Anesthesiologists meeting in San Francisco, the largest gathering of anesthesiologists in the world. A week later, Dr. Otto presented

at the New York Society of Anesthesiologists conference in New York City, which is the second-largest meeting and attended by many medical experts from Europe.



CHINA

In October, a delegation of **physicians from China** visited the Sarver Heart Center and heard first-hand why bystanders performing continuous chest compressions without mouth-to-mouth breathing and paramedics following the Sarver Heart Center Cardiocerebral Resuscitation protocol increase the chances of survival after out-of-hospital cardiac arrest.

AUSTRIA, SWITZERLAND

“CPR without rescue breathing sounded counterintuitive to me”

Mathias Zuercher, MD from the Department of Anesthesia and Intensive Care at the University Hospital in Basel, Switzerland and **Michael Loedl**, who just graduated from the Medical University in Innsbruck, Austria came to Tucson to spend some time working with the Sarver Heart Center Resuscitation Research Group. Dr. Zuercher stayed for 15 months and participated in numerous studies. “I am especially

continued on page 4

CPR Worldwide

continued from page 3

impressed with the Sarver Heart Center's interdisciplinary approach," said Dr. Zuercher. "To have emergency physicians, pediatric intensive care specialists, anesthesiologists and cardiologists work together this closely is an extremely rare and stimulating experience." Loedl added, "The research group I work with back in Austria has a long-standing collaboration with the Sarver Heart Center. It is a very enriching experience to see how resuscitation research is done on both sides of the Atlantic." Asked what brought him here, Dr. Zuercher said: "I have followed the studies from the Sarver Heart Center for a long time – and to me as an anesthesiologist, doing CPR without rescue breathing sounded counterintuitive – so I wanted to see for myself. Our joint work has been incredibly fruitful and we hope to enhance our long-term collaboration between the centers in Tucson, Austria and Switzerland."



Mathias Zuercher, MD, and Michael Loedl (right).



Saving Young Lives: Bob Berg, MD explains how to perform infant CPR for a public service segment to be aired on the Tucson City TV Channel.

NEPAL

Leading the way in CCR

Cardiocerebral Resuscitation (CCR), the more effective protocol developed at the Sarver Heart Center for paramedics responding to cardiac arrest, could become standard practice in Nepal long before it gains widespread acceptance in the United States. Brendan Thomson, MD, a 1975 graduate of the medical residence program at the UA, is determined to help implement the life-saving protocol in the Himalayan country. "I have always felt that my goal was to act as a bridge, to provide a transition of knowledge to physicians in Nepal," says Dr. Thomson. "Since 1985, when I was first in Nepal and there were *no* medical schools, one traffic light and one volume-cycled ventilator, there have been remarkable changes for the good. With the blessing of Dr. Ewy we will be ahead of the curve and implement Cardiocerebral Resuscitation before it becomes official in the U.S."

Awards for Statewide Advances in Resuscitation

Bentley Bobrow, MD, of the Sarver Heart Center Resuscitation Research Group received the prestigious Best Resuscitation Science Abstract Award at the Resuscitation Science Symposium at this year's Annual Scientific Sessions of the American Heart Association in Orlando, Florida. Presentations authored by Dr. Bobrow and his colleagues to an international audience of cardiologists and emergency medicine experts received the first and third place, chosen from more than 120 submitted abstracts. Dr. Bobrow, who is the medical director of the Bureau of Emergency Medical Services and Trauma of the Arizona Department of Health Services, presented exciting new data obtained under the umbrella of the SHARE program from 38 fire departments serving



Sarver Heart Center CPR Research Group members Bob Berg, MD (left) and Karl B. Kern, MD (right) congratulate Ben Bobrow, MD on receiving the "Best Abstract" award.

70 percent of Arizona's population. (SHARE stands for 'Save Hearts in Arizona Registry and Education', www.azshare.gov) The results showed that the chances of surviving out-of-hospital cardiac arrest were significantly higher when paramedics followed the Cardiocerebral Resuscitation (CCR) Protocol developed at the Sarver Heart Center compared to fire departments following standard guidelines. Cardiocerebral Resuscitation emphasizes continuous chest compressions, interspersed use of the external defibrillator and delayed intubation. Dr. Bobrow reported that the survival rate in the patient group

two Wisconsin counties (see *Paramedics Save More Lives When They Don't Follow the Rules*, newsletter issue 46). "Approximately 5,000 Arizonans suffer sudden cardiac arrest each year in our state. These are our colleagues, neighbors, and family who die suddenly and tragically," said Dr. Bobrow. "This award is a great honor for our state, our EMS system, and certainly our EMS providers. Most importantly, our collective effort has resulted in over 120 saved lives from cardiac arrest over the past three years!"

The second abstract reported on a new approach to ventilation during resuscitation that was also first advocated by Sarver Heart Center resuscitation researchers. The study monitored the impact of paramedics or firefighters providing oxygen to cardiac arrest victims via a continuous-flow mask versus applying forceful ventilations with a breathing bag. Survival rates were significantly better with continuous oxygen flow in patients with a witnessed arrest and a shockable heart rhythm. These results are important in that they indicate the use of a breathing bag may not be beneficial for cardiac arrests victims. The studies presented at the Resuscitation Science Symposium have been submitted for publication in the scientific literature. ♥

treated with CCR was almost three times higher than in the group receiving standard treatment. These data confirm earlier observations made by fire departments in



SYRIA Culture Shock

Hussein Ali Alterkawi is a medical student from Syria who is completing rotations in Oncology, Nephrology and Cardiology at the UA College of Medicine. During his stint at the Sarver Heart Center he was asked by American colleagues about the "biggest culture shock" he experienced during his U.S. visit. Alterkawi replied without hesitation: "The New CPR!"

“I was privileged to recruit Gene from Harvard – and that was only possible because of a donation from the Pfeiffer Foundation to create the endowed chair. Gene has made tremendous contributions to education, patient care and research.”

– FRANK I. MARCUS, MD

“I was a grad student at the time – Joe and his staff taught me what I needed to know.”

– CYNTHIA ADAMSON, PhD

Reflections on Founding Members of the Sarver Heart Center

Eugene ‘Gene’ Morkin, MD and Joseph ‘Joe’ Bahl, PhD said farewell to friends and colleagues at the Sarver Heart Center during a joint retirement celebration in October. Dr. Morkin was the C. Leonard Pfeiffer Professor of Medicine and was also a professor of pharmacology and physiology. A native of Oklahoma, Dr. Morkin received his MD degree in 1959 from the University of Oklahoma. He was an intern

and assistant resident on the Second (Cornell) Medical Division at Bellevue Hospital in New York City from 1959 to 1961. He was a resident in medicine and research fellow at the Columbia-Presbyterian Medical Center from 1961 to 1966. From 1966 to 1974, he advanced from Instructor to Associate Professor in Medicine at the Harvard Medical School and was Chief of Cardiology at Beth Israel Hospital. Dr. Morkin came to The University of Arizona in 1974 to assume the

C. Leonard Pfeiffer Chair of Cardiovascular Research. He was the founding Director of The University of Arizona Sarver Heart Center and served as Director from 1986 to 1991. His most important scientific contributions include the discovery of biochemical



Joe Bahl, PhD (second from left) and Gene Morkin, MD (center) were presented with certificates of appreciation and gratitude by their colleagues, Sarver Heart Center Director Gordon A. Ewy, MD, Frank I. Marcus, MD and Steven Goldman, MD (from left to right).

“Gene was an ideal mentor to me. He told me, ‘This is your lab – come back in six months and let me know what you’ve found.’ I’m sorry to see him go.”

– STEVEN GOLDMAN, MD

“When I came to the UA as a young academic cardiologist, having Joe around was an incredible help. He was extremely good at explaining complex research issues.”

– STEVEN GOLDMAN, MD

“Gene did pure science and he has been an inspiration.”

– BRENDAN PHIBBS, MD

processes that control the function of the heart. After moving to Arizona, his group identified special forms of the muscle protein myosin that are only found in the heart. Recently, he has identified a thyroid-hormone-like drug that may be useful for weight loss.

Dr. Bahl came to the Department of Medicine with a doctorate in organic chemistry from The University of Arizona and advanced through the ranks from research assistant professor to research scientist at the Sarver Heart Center. Working closely with Rubin Bressler, MD, he studied the properties of adult heart muscle cells, molecular transport mechanisms on the cellular level and diabetes. He then went on to develop the Sarver Heart Center’s core tissue culture facility, a critical resource for a number of investigators. Throughout his career, Dr. Bahl was very passionate about teaching students and researchers. He served as a mentor of many graduate students and as a pivotal link in many collaborations among Sarver Heart Center researchers. ♥

“It was a fun time – so intense that Gene held lab research meetings twice a week. Once I worked a full Thanksgiving Day preparing cells. I certainly would not have done that for somebody I didn’t admire and think the world of.”

– JOE BAHL, PhD

Gene was the greatest mentor, not just to me but also to many other grad students.”

– CYNTHIA ADAMSON, PhD

“Joe was an essential research colleague.”

– RUBIN BRESSLER, MD

“Gene was a role model for academic medicine, embracing research, teaching and patient care. We wish him the best in his retirement.”

– GORDON A. EWY, MD

“On one of the walls in Gene’s office was a picture of an awesome structure. One day, I asked him, ‘What is that picture of?’ Gene said, ‘That’s the heart center we are going to build someday.’ Thank you, Gene, for helping start the Heart Center.”

– PAUL McDONAGH, PhD

Save the Date

Healthy Heart Conference

February 16, 2008

8 a.m. – 12 p.m.

DuVal and Kiewit Auditorium
University Medical Center,
Tucson

Learn what you need to know to lower your risk of heart disease! Sarver Heart Center experts will present the latest findings on high blood pressure, heart and vascular disease, diabetes and stroke.

To learn more, call
(520) 626-3766 or visit
www.heart.arizona.edu.



2008 Gootter Grand Slam Tennis Tournament

March 29-30, 2008

Proceeds will support the Sudden Cardiac Death Research Program at the Sarver Heart Center through the Steven M. Gootter Foundation.

Saturday, March 29, 2008

Gala Dinner at Skyline Country Club, Tucson

During the event, the Steven M. Gootter Philanthropic Award will be presented to Bazy Tankersley

Sunday, March 30, 2008

Gootter Grand Slam Tennis Tournament at Randolph Tennis Center. All levels are welcome!

To learn more, please visit the Steven M. Gootter Foundation online at stevenmgootterfoundation.org or call (520) 615-6430.

A Charitable Gift Annuity at Work

It was in the mid-1990's that Bob and Madeline Lamb, residents of Green Valley, Ariz. became acquainted with the Sarver Heart Center. For some time they had known there was something not quite right with Madeline's heart but could never seem to get a satisfactory answer.

"There had been a strong history of heart disease in my family," says Madeline, "despite our longevity. I was relieved when Dr. Marvin Slepian, my cardiologist at the Sarver Heart Center, told me that my major problem was pulmonary hypertension and prescribed a treatment for it." Pulmonary hypertension occurs when a patient has high blood pressure in the arteries that supply the lungs. More recently Madeline was diagnosed with an abnormal heart rhythm and received treatment by Peter Ott, MD, one of the Sarver Heart Center's electrophysiology experts.

"I guess I should not have been too surprised," says Madeline. "My older brother and younger sister have experienced electrical problems with their hearts."

Bob's family was also no stranger to heart disease. "My older son had very high cholesterol, aneurysms and cardiovascular surgery. He died from a stroke when but 56 years of age. My younger son also has had high cholesterol and heart surgery." Three years ago, Bob himself underwent surgery by Sarver Heart Center member Joseph Mills, MD for two aneurysms.



Bob and Madeline Lamb

Bob was born and raised in Iowa. "As a teenager I detasseled corn on nearby farms for the Pioneer Hybrid Seed Company –10 hours a day for 30 cents an hour!" After he graduated from college, Bob's employment included serving for more than 10 years as a Special Agent for the FBI, thereafter working in a variety of administrative and management positions at North American Aviation, Rockwell International and Hughes.

Madeline, a native of Maine, spent most of her professional life as a nurse. In 1969, after an accident left her with a seizure disorder, she became an active health advocate and subsequently received a Governor's appointment to the Orange County, California, Area Board for Developmental Disabilities, on which she served for eight years. Through lengthy negotiations with the Orange County Transportation District and private companies she managed to bring the county into compliance with a federal law mandating a viable transportation system for those with developmental disabilities.

"Our families' histories with heart disease and our relationship with the Sarver Heart Center sparked our interest in supporting cardiovascular research," says Madeline. This interest, combined later with a briefing on The University of Arizona Foundation's Charitable Gift Annuity Program, has led the Lambs to make a gift to

CHARITABLE GIFT ANNUITY

A charitable gift annuity is a simple contractual arrangement between the donor and the UA Foundation. The UA Foundation will make payments to one or two individuals over the course of their lifetime, after which the gift will benefit the selected area at the University. For more information, please call the Sarver Heart Center Office of Development at (800) 665-2328.

One Life

Your Age	Rate of Return
70	6.5%
75	7.1%
80	8.0%
85	9.5%
90 +	11.3%

Two Lives

Your Age	Rate of Return
70/75	6.1%
75/80	6.6%
80/85	7.3%
85/90	8.4%
90/95 +	10.1%

The rate of return is slightly lower for two lives because the period of payment generally is longer.

Glendale Man Learns ‘Sarver CPR’ From the Firefighters Who Saved His Life

Daniel Lane was sitting in his home in Glendale, Ariz. with his wife, Melissa, when he felt shoulder pain and became short of breath. Mrs. Lane called 9-1-1 and Glendale Firefighters arrived about five minutes later. Mr. Lane was having a myocardial infarction. By the time he arrived at the hospital, he went into cardiac arrest and had to be resuscitated by the firefighters. Although



During a free public CPR demonstration in Glendale, Ariz., cardiac arrest survivor Daniel Lane practiced the correct moves under the eyes of the pros.

myocardial infarction and cardiac arrest are commonly referred to as “heart attacks” there is an important difference. A myocardial infarction or MI refers to a blockage of one of the coronary arteries that supply the heart muscle. When a myocardial infarction occurs, the heart is still beating and pumping blood. However, an MI can cause the heart to stop beating, which is called cardiac arrest. That is why it is so important to call 9-1-1 if someone is having chest pain, the most

common manifestation of an MI. You should not try to drive someone having an MI to the hospital as they might go into cardiac arrest. Mrs. Lane was a lifesaver as she called 9-1-1. If she hadn’t, her husband would have gone into cardiac arrest without the supporting environment of an ambulance and medical professionals. This is called out-of-hospital cardiac arrest – the most common cause of

death in the western world.

On September 21, Mr. Lane attended a free public CPR demonstration with Glendale Fire. Guest speaker was Ben Bobrow, MD, Medical Director for the Arizona Department of Health Services Bureau of Emergency Medical Services. Dr. Bobrow, a member of the Sarver Heart Center Resuscitation Research Group, explained the benefits of Continuous-Chest-Compression CPR to an audience of about 125. ♥

Gift Annuity

continued from page 8

the UA Foundation to help fund research at the Sarver Heart Center.

In the Lambs’ situation, the Charitable Gift Annuity Program has been an excellent vehicle for making such a gift. As a long-time employee of Rockwell International, Bob chose to participate fully in the company’s savings plan that matched employee contributions with company stock. “Over the years the stocks in my plan had greatly appreciated,” Bob says. “Were we to sell the stocks, we would likely have to pay a large capital gain tax. However, by transferring ownership of the stocks to the UA Foundation under the Charitable Gift

Annuity Program, we have been able to avoid that tax and, at the same time, increase our income over the stocks’ prevailing yields. Most importantly however, in this way we were able to provide funds to the UA Foundation to help support research at the Sarver Heart Center. We hope that our gift will help other families like ours.”

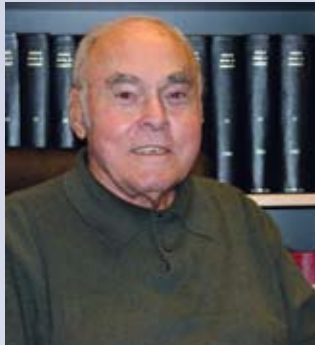
“Gifts like Bob and Madeline’s help sustain the success of the Sarver Heart Center,” says Center Director Gordon A. Ewy, MD. “Research is the key to a future free of heart disease and stroke. Many will benefit from discoveries made possible through this gift. We are grateful to Bob and Madeline for their thoughtful planning and generosity.” ♥

Awards

The Alumni Association of The University of Arizona has honored the following members and supporters of the Sarver Heart Center.

Rubin Bressler, MD received the Professional Achievement Award for Extraordinary Faculty.

Dr. Bressler has dedicated his life to academic medicine. He served as department head for three UA departments, including the Department of Medicine. In addition to his administrative leadership in the College of Medicine, he provided care to thousands of patients and published groundbreaking research during his career of more than 37 years at the UA. He has been a mentor and teacher since the opening of the College of Medicine in 1967.



Allan and Alfie Norville, both active members of the Sarver Heart Center Advisory Board, were recognized for their outstanding philanthropic achievements with the UA Foundation's Distinguished Citizen Award. Their generosity, combined with an anonymous gift,

has made possible the creation of the Allan and Alfie Norville Endowed Chair for Heart Disease in Women Research, which will prove instrumental in unraveling the molecular differences in heart disease between genders and identifying new ways to detect and treat cardiovascular disease in women (see newsletter issue 49). ♥

From the Research Lab to the Clinic:

Our Donors' Generosity Enables Young Sarver Heart Center Scientists to Pursue Promising Research

Predicting the Risk of Sudden Cardiac Death

The **Steven M. Gootter Investigator Award for the Prevention of Sudden Cardiac Death**

was established by Joe and Paulette Gootter and the Steven M. Gootter Foundation, in memory of Steven, whose life was cut short tragically by sudden cardiac death.

Awarded to: **Vincent L. Sorrell, MD**, professor of clinical medicine and radiology and holder of the Allan C. Hudson and Helen Lovaas Endowed Chair of Cardiovascular Imaging, and **Brian Boudi, MD**, Cardiology Fellow.

Project: Evaluate the predictability of sudden cardiac death risk using Cardiac Magnetic Resonance Imaging (MRI); start a prospective registry of patients receiving implantable defibrillators.

Background: Given that *each day* in the U.S., about one thousand people die from sudden cardiac arrest, continued research is critical to develop tools that allow doctors to better predict who is at risk and who is not. New imaging techniques could prove as the most powerful tools to help make these predictions.



Joe and Paulette Gootter, with daughters Claudine and Shari

Hormones and Heart Attacks

The **Mark and Mary Anne Fay Investigator Award** is the result of the generosity of long-time Sarver Heart Center Advisory Board members and supporters Mark and Mary Anne Fay. Mary Anne plays a vital role in fundraising and education for cardiovascular care for women. The award promotes innovative and promising research in the area of the prevention and treatment of heart disease in women.

Awarded to: **Beibei Xu, PhD**, Postdoctoral Research Associate in the Department of Pharmacology

Project: Using progesterone to prevent cell death in the heart

Background: Postmenopausal women face an increased risk of heart attack. A lot of controversy has surrounded hormone replacement therapy. Dr. Xu's group discovered that progesterone may have a beneficial effect on heart muscle cells: The hormone appears to switch on genes that help the cells shed toxic chemicals and prevent cell death. The researchers set out to investigate whether progesterone could reduce the severity of heart attacks.

The **Bettie F. Pitts Memorial Heart Disease Research Award** is given to researchers working on projects with great promise in helping the Sarver Heart Center accomplish its mission of a future free of heart disease and stroke. The award is made in gratitude and in celebration of our dear friend from Green Valley, long-time board member, volunteer and supporter, Bettie Pitts.

Awarded to: **Betsy Dokken, PhD, NP**, Postdoctoral Fellow and Research Associate, Department of Surgery

Project: Genetic and Functional Effects of Glucagon-like Peptide 1 on the

Diabetic Heart

Background: Diabetic patients are more likely to develop heart failure after a myocardial infarction or "heart attack". Studies in animal models have shown that treating an infarcted heart with Glucagon-like Peptide 1 lowers the damage to the heart muscle. This study will determine whether GLP-1 treatment improves the pumping action of the heart after a heart attack in diabetic animal models.

The **Frank Frazer and William Alexander "Alex" Frazer, MD Young Investigator Award** was created by Frank and Ellen Frazer, whose son, Dr. Alex Frazer, received a heart transplant in 1990. After his passing in 1996, Frank and Ellen established the endowment to fund innovative and creative research projects that had not developed enough to qualify for outside funding.

Awarded to: **Reza M. Movahed, MD**, Associate Professor of Medicine

Project: Clinical consequences of *Chlamydia* infection and atherosclerosis

Background: Recent studies suggest that some germs may contribute to heart disease. One pneumonia-causing bacterium, *Chlamydia pneumoniae*, is found in portions of arteries afflicted with heart disease. This research project aims to find out if and how the bacterial infection impacts the severity of heart disease.

A special clinic for hereditary heart defects

The **William J. 'Billy' Gieszl Endowment for Heart Research**

was established by the Gieszl family in memory of their son and brother, William Gieszl. The endowment provides support for basic and clinical scientific investigations to achieve improved diagnosis, treatment and prevention of congenital heart disease.



Jim and Amy Gieszl with last year's award recipient Brent J. Barber, MD

Awarded to: **Vincent L. Sorrell, MD**, professor of clinical medicine and radiology and holder of the Allan C. Hudson and Helen Lovaas Endowed Chair of Cardiovascular Imaging

Project: Develop a multispecialty clinic for the care of adult patients with congenital heart disease.

Background: Because of improved diagnosis and treatment options, more and more patients with inherited heart problems survive into adulthood. In 2007, there are now more adults with congenital heart disease than children. This number grows by 20,000 patients each year. Caring for these patients is challenging, as they have to live with the anomalies they were born with and at the same time develop the common cardiovascular problems associated with aging. These patients are in need of a specialized, multidisciplinary approach to their management. ♥

ADDRESS SERVICE REQUESTED

Valve-Sparing Procedure for Life-Threatening Aneurysms

In a first for University Medical Center, Sarver Heart Center member **Raj K. Bose, MD**, and co-director **Jack G. Copeland, MD** performed a heart surgery procedure on August 24 that has given Tucson resident Joan Lapchynski a new



Jack G. Copeland, MD

lease on life and time to enjoy her eight children, 23 grandchildren and 27 great-grandchildren. A routine chest x-ray revealed an ascending aortic aneurysm, a bulge more than two inches wide in the portion of the aorta that attaches to the heart and receives blood that it carries on

to the rest of the body.

Aortic aneurysms have been called “stealth killers” because in many cases it is unknown what causes them or how they can be prevented. Many patients have no symptoms and the bulging and weakening of the aorta wall goes unnoticed. Aneurysms pose a life-threatening risk because the stretched aortic wall can easily rupture.

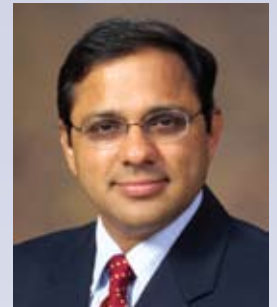
“When that happens, a person can bleed to death within minutes,” said Dr. Bose. “Aortic aneurysms are less well known than heart attacks or cancer, but they are among the 15 most-common causes of death.”

To repair an ascending aortic aneurysm, surgeons remove the bulging, diseased portion of the aorta and bridge the gap with a graft made of synthetic material. During this procedure, the aortic valve, which controls blood flow from the heart into the aorta, often has to be

removed. The patient needs to be fitted with a replacement valve – in most cases an artificial valve or a

tissue valve obtained from swine.

In Mrs. Lapchynski’s case, the surgeons applied a relatively new type of graft and performed a special procedure, both of which enabled them to leave the native aortic valve in place. “This is a huge advantage for the patient,” said Dr. Bose. “Replacement valves last only a limited time and, more importantly, require the patient to take blood-thinning medications for the rest of their life to prevent blood clots.” ♥



Raj K. Bose, MD