

## Chest-Compression-Only CPR Advances, but AHA Guidelines Lag

Sarver Heart Center's Resuscitation Research Group published Arizona data in the Oct. 6, 2010 issue of the *Journal of the American Medical Association (JAMA)*, which validated the group's decades of research and advocacy. Data from the first intentional effort to encourage and endorse chest-compression-only CPR by lay individuals show what many in Arizona have known all along: survival rates for patients with out-of-hospital cardiac arrest are better when bystanders do chest-compression-only CPR, compared with CPR that calls for chest compressions interrupted by so-called mouth-to-mouth "rescue breaths."

The study's major findings include:

- The rate of bystanders becoming involved with CPR for patients with out-of-hospital cardiac arrest increased significantly from 28 percent in 2005 to 40 percent by the end of 2009.
- The rate of chest-compression-only CPR rose from 20 percent in 2005 to 76 percent in 2009.
- A significantly greater percentage of cardiac arrest victims survived in the chest-compression-only CPR group (13.3 percent) compared to those in the conventional CPR group (7.8 percent).



*Drs. Karl B. Kern, Gordon A. Ewy and Bentley J. Bobrow work on publications*

Gordon A. Ewy, MD, senior author and UA Sarver Heart Center director says, "For us, the most important findings of this analysis are the differences in survival rates of individuals who had the greatest chance of surviving—those whose collapse was witnessed and who had a heart rhythm that could be restored by a defibrillator shock. In these patients, 18 percent survived when conventional CPR was performed and 34 percent survived when chest-compression-only CPR was performed."

The UA Sarver Heart Center Resuscitation Research Group first advocated chest-compression-only CPR in Tucson in 2003. As part of the Save Hearts in Arizona Research and Education (SHARE) program ([www.azshare.gov](http://www.azshare.gov)), a statewide effort was launched in Arizona in 2004.

"In 2004, fire departments, EMS ambulance

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## ...from the Director


This issue of the Sarver Heart Center Newsletter addresses our continued progress in chest-compression-only CPR and cardiocerebral resuscitation, and our frustration with the national and international guidelines process. On a positive note, the national and international recognition of our efforts has resulted in significant support from the news and television media. We also are receiving more and more invitations for members of the Sarver Heart Center Resuscitation Research Group to write reviews and editorials and to present nationally and internationally. We will continue our research and education efforts to improve our approach to resuscitation. On one of my recent trips, a professor from Duke University said, "Dr. Ewy, I'm glad to meet you. You know, years ago when you first advocated chest compressions without ventilations, we thought you were certifiably insane, but now we are instituting all of your recommendations."

A major focus of this issue is a follow up on competitive "start-up grants" that the Sarver Heart Center makes available each year to its members. These grants, that vary from \$2,500 to \$25,000, come from families just like yours to the Sarver Heart Center to help fight cardiovascular disease. Each spring, members apply and compete for these grants that support promising projects so that they can obtain preliminary data needed for grants from national organizations, such as the National Institutes of Health. Without preliminary data, researchers have no chance of competing for the million-dollar national grants necessary to complete an important, complex research project that could lead to a significant breakthrough. (Stories are on pages 6-8.)

This issue's "Heart News for You," written by Dr. Peter Ott, is about atrial fibrillation. To keep in step with our "ABCs of Cardiovascular Disease," we had to stretch a bit to make "I" stand for irregular heartbeats. Atrial fibrillation is an extremely important cardiovascular condition that needs to be understood by all.

Please note the following upcoming events. Our Green Valley lecture series is under way. See page 12 for the remaining schedule. Mark your calendars now for Feb. 12, 2011, for our annual *Healthy Heart Conference* in University Medical Center's DuVal Auditorium in Tucson. We are finalizing our program, which will include presentations from Drs. Lorraine Mackstaller, Karl B. Kern, Peter Ott, Leslie Ritter, and me. Next year's *Heart of the Matter* luncheon on women and heart disease is scheduled for Oct. 15, 2011.

For many of our patients, the retirement of Isabelle Preiss is a real milestone. When my patients ask what they should do without Isabelle, I tell them they are just going to have to deal with the "Young" secretary. Debbie Young has only worked for us for 24 years! We plan to continue our efforts to have every call to the Sarver Heart Center answered by a real person and not a pre-recorded menu or computer response. Pam Abrams, who has been with us for 25 years, has requested to be our point person and is now our official "greeter" at the Sarver Heart Center.

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

## Sarver Heart's Chest-compression-only CPR Video is in Demand

About 3.9 million people have viewed Sarver Heart Center's training video on YouTube or the University of Arizona websites. A growing number of churches, schools and other organizations have requested DVDs for use in their training programs. These include U.S. Homeland Security's Division of Workforce Health, FlightSafety International for its 42 training centers worldwide, the International Electrical Workers Union in New York, the American Museum of Natural History and Chevron in Salt

Lake City and Bangkok.

You can watch the video from [www.medicine.arizona.edu/sarver-cpr](http://www.medicine.arizona.edu/sarver-cpr). Please share this life-saving link with your family, friends and colleagues. Note that Sarver Heart's YouTube Channel includes a second video on how to use an AED (automatic external defibrillator). If you are unable to watch the videos via the Internet and would like a copy of the DVDs, please e-mail or call Jennifer Bunger at [jbunger@shc.arizona.edu](mailto:jbunger@shc.arizona.edu) or (520) 626-2901.

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companies and hospitals across Arizona all made an enormous collective effort to teach chest-compression-only CPR to their communities for free. This has resulted in hundreds of lives saved in Arizona,” says Bentley J. Bobrow, MD, lead author and medical director of emergency medical services at the Arizona Department of Health Services and member of the SHC Resuscitation Research Group.

“This statewide chest-compression-only CPR effort was an integral part of the overall efforts to improve survival of patients with out-of-hospital cardiac arrest that also included new recommendations for paramedics and hospitals,” says Karl B. Kern, MD, co-author, acting chief of cardiology at the UA College of Medicine and chair of the SHC Resuscitation Research Group.

“The importance of this study as well as our other studies cannot be overstated. Out-of-hospital cardiac arrest claims the lives of an estimated 300,000 Americans each year. If chest-compression-only CPR and other protocols of cardiocerebral resuscitation were implemented nationally by emergency responders and cardiac receiving centers, an estimated 58,000 lives could be saved each year in the United States alone,” says Dr. Ewy.

### **Evolving AHA Guidelines**

The new American Heart Association guidelines recommend “Hands-only CPR” for untrained individuals. However, the AHA encourages all to become “certified” to learn what it thinks is the best method: now 30 chest compressions before the first two ventilations—CAB (*compressions, airway, breaths*) rather than ABC (*airway, breathing, compressions*).

Unfortunately, the five-year cycle of the AHA’s CPR

guidelines review and writing process is completed months before the guidelines are published. While the AHA made progress toward the Sarver Heart Center Resuscitation Research Group’s recommendations, it has not yet unequivocally endorsed chest-compression-only CPR for all rescuers.

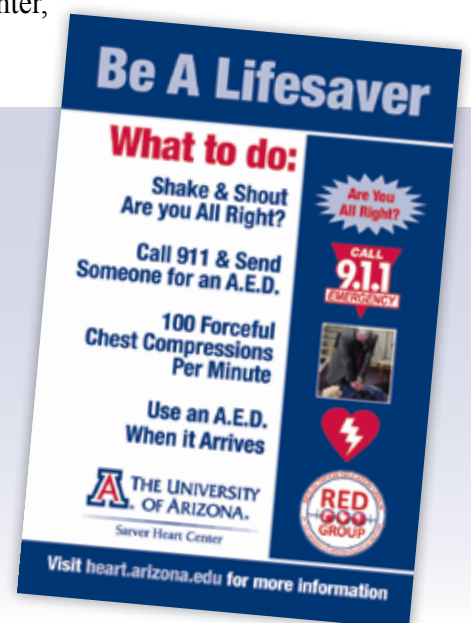
“I’m disappointed that the AHA continues to recommend 30 compressions to two breaths for all who are certified in this method,” says Dr. Ewy. “Why do the 2010 guidelines advocate that all emergency medical services dispatch centers instruct lay individuals in chest-compression-only CPR, and yet not advocate it for trained lay people? Why do the guidelines state that, ‘Rescuers should avoid stopping chest compressions and avoid excess ventilations,’ and yet not advocate chest-compression-only CPR for trained lay people?”

Since 1976, the AHA guidelines advocated chest compressions plus ventilations for all patients with cardiac arrest because of a concern that bystanders would not be able to tell the difference between primary and secondary cardiac arrest; i.e., secondary to drowning, drug overdose or respiratory failure. In these cases, patients need chest compressions plus assisted ventilation. The SHC Resuscitation Research Group recommends that people become trained to perform mouth-to-mouth assisted ventilation, especially those who have a swimming pool or live near a lake or an ocean—situations where you are likely to witness a respiratory arrest or drowning.

“There are hundreds of cardiac arrests for every drowning, so the 2010 AHA guidelines advise trained lay people to do the wrong thing for the majority of cases they are likely to encounter,” says Dr. Ewy. ♥

### **What Does Primary Cardiac Arrest Look Like?**

“It is easy to distinguish a primary from a secondary cardiac arrest, but it must be taught. Primary cardiac arrest is recognized by an unexpected, witnessed (seen or heard) collapse in an individual who is not responsive. Patients with primary cardiac arrest often gasp (an abnormal snoring-like respiration) which provides adequate ventilation, but indicates a cardiac arrest. If chest-compression-only CPR is provided, the individual often continues to gasp, and in such patients assisted ventilations are not necessary for prolonged periods of time,” says Dr. Ewy. But chest compressions plus ventilation is recommended for respiratory arrest from drowning or drug overdose.



**'I' is for Irregular Heartbeats**

# Controlling the Electrical Chaos of Atrial Fibrillation

By Peter Ott, MD

**A**trial fibrillation, the most common heart rhythm abnormality, affects about 3 million individuals in the United States, with the number projected to increase as our population ages. Half of these patients will be 80 years or older.

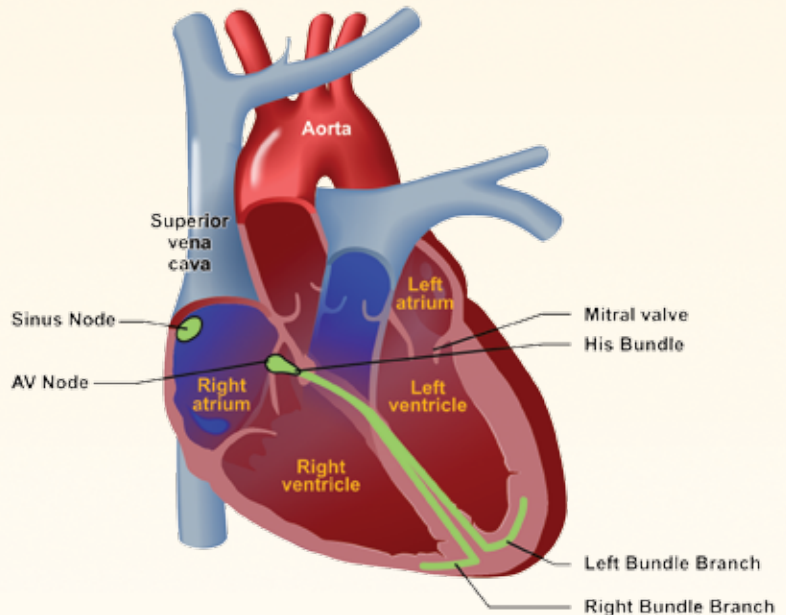
In atrial fibrillation, the heart rate tends to be fast and irregular; thus the patient often complains about heart palpitations, racing or skipping sensations. These patients experience three types of episodes:

- *Paroxysmal atrial fibrillation*: episodes recur and typically stop spontaneously within hours to days.
- *Persistent atrial fibrillation*: episodes do not terminate spontaneously, but medical therapy can revert the rhythm to normal.
- *Permanent atrial fibrillation*: a chronic, irregular heart rhythm that cannot be reverted back to a normal rhythm, but if associated with a fast heart beat, the rate can be controlled with medication.

## The Electric Heart: A Brief Lesson in Anatomy and Physiology

The heart consists of four chambers: two upper chambers (right and left atrium) and two lower chambers (right and left ventricle). These chambers rely on the heart's own electrical system to stimulate muscle contractions to pump blood through the body. The heart's electrical system includes a "spark plug" (sinus node), located at the top of the right upper chamber (atrium) that initiates the heart beat by sending an electrical impulse which travels through both the right and left atria. This electrical impulse eventually conducts through a connector cable (AV node), exciting the lower chambers (ventricles), which then contract and expel blood.

In atrial fibrillation, the atrium is in a state of electrical chaos with several hundred impulses exciting the upper chambers in random pattern. Thus the upper chambers can no longer contract in a coordinated fashion. These impulses also jostle to travel through the AV node and



stimulate the lower chambers, typically in a fast and irregular fashion.

**Symptoms:** With the fast and irregular heart rate, the patient often complains about palpitations, racing or skipping sensations. Since the heartbeat is no longer coordinated, the patient may have fatigue, light-headedness, chest discomfort or shortness of breath. Note that these symptoms are not necessarily specific to atrial fibrillation and can occur with many other conditions. The uncoordinated upper chamber's contractions increase the risk of blood clots and stroke. (More on this later.)

**Diagnosis:** An electrocardiogram (ECG) records the electrical activity of the heart (both upper and lower chambers) and exhibits characteristic changes when atrial fibrillation is present. Sometimes a long-term ECG recording is required to capture the event. This might be a 24-hour ECG or an "event monitor" that is worn for days.

**Causes:** Atrial fibrillation increases with age, affecting approximately 10 to 15 percent of individuals 80 years or older. These patients often have other conditions such as high blood pressure, heart failure or heart-valve disease. On rare occasion, an overactive thyroid gland (hyperthyroidism) or excessive alcohol consumption can precipitate periods of atrial fibrillation. Other triggers may be an acute illness, such as a severe infection or major surgery, in particular cardiac surgery. In those situations the condition often resolves spontaneously. Recently, obesity and obstructive sleep apnea have been recognized as new risk factors. Research has disclosed genetic defects that predispose families to atrial fibrillation.

## Therapy:

- 1) About one-fifth of all strokes occurring in the United States (approximately 500,000 per year) are related to atrial fibrillation. These are potentially preventable with

blood-thinning medicines, such as warfarin (Coumadin anticoagulation). A new medicine that does not require blood-test monitoring has been approved recently as an anti-coagulant, but unfortunately is very expensive. Strokes related to atrial fibrillation tend to be more devastating and lethal than those related to other conditions. The average annual stroke risk in atrial fibrillation patients is approximately 5 percent, but may range between less than 1 percent and 15 percent, depending on several risk factors. Doctors consider the risk factors of age greater than 75 years, hypertension, diabetes, heart disease and prior stroke to determine the need for warfarin, aspirin therapy or other therapy. Anticoagulation therapy reduces the risk of stroke by approximately 75 to 80 percent. The small risk of bleeding complications requires close monitoring of the blood test INR (international normalized ratio), with a goal of a value generally between two and three. Only in extremely selected and fairly healthy individuals is full-dose aspirin sufficient to prevent a stroke. Warfarin is superior to the combination of aspirin and Plavix (clopidogrel) to prevent stroke, but the combination sometimes is needed in patients who have atrial fibrillation and a drug-eluting stent (DES).

- 2) Electrical cardioversion or cardioversion with intravenous medication are therapies to revert atrial fibrillation to a normal rhythm. However, neither of these strategies will be able to maintain a normal rhythm for the long haul. Therefore, medications that suppress atrial fibrillation and maintain a normal rhythm may be prescribed.
- 3) Another option is to use medications to prevent fast heart rates in the lower chambers while accepting atrial fibrillation in the upper chambers.

The best individual strategy requires careful evaluation by the treating physician. None of these medications can “cure” atrial fibrillation and it is likely to return—hopefully at a lesser frequency and with less severe symptoms.

### Recent Advances

Recent advances have been made in **catheter ablation**, a therapy that cauterizes or burns out regions inside the heart that are responsible for initiating and maintaining atrial fibrillation. In highly selective patients, typically younger age, normal heart, brief duration of atrial fibrillation, this approach may be able to control the condition in up to 70 to 80 percent of cases. This procedure is fairly complex and has a small risk of complications including stroke, bleeding and damage to the heart.

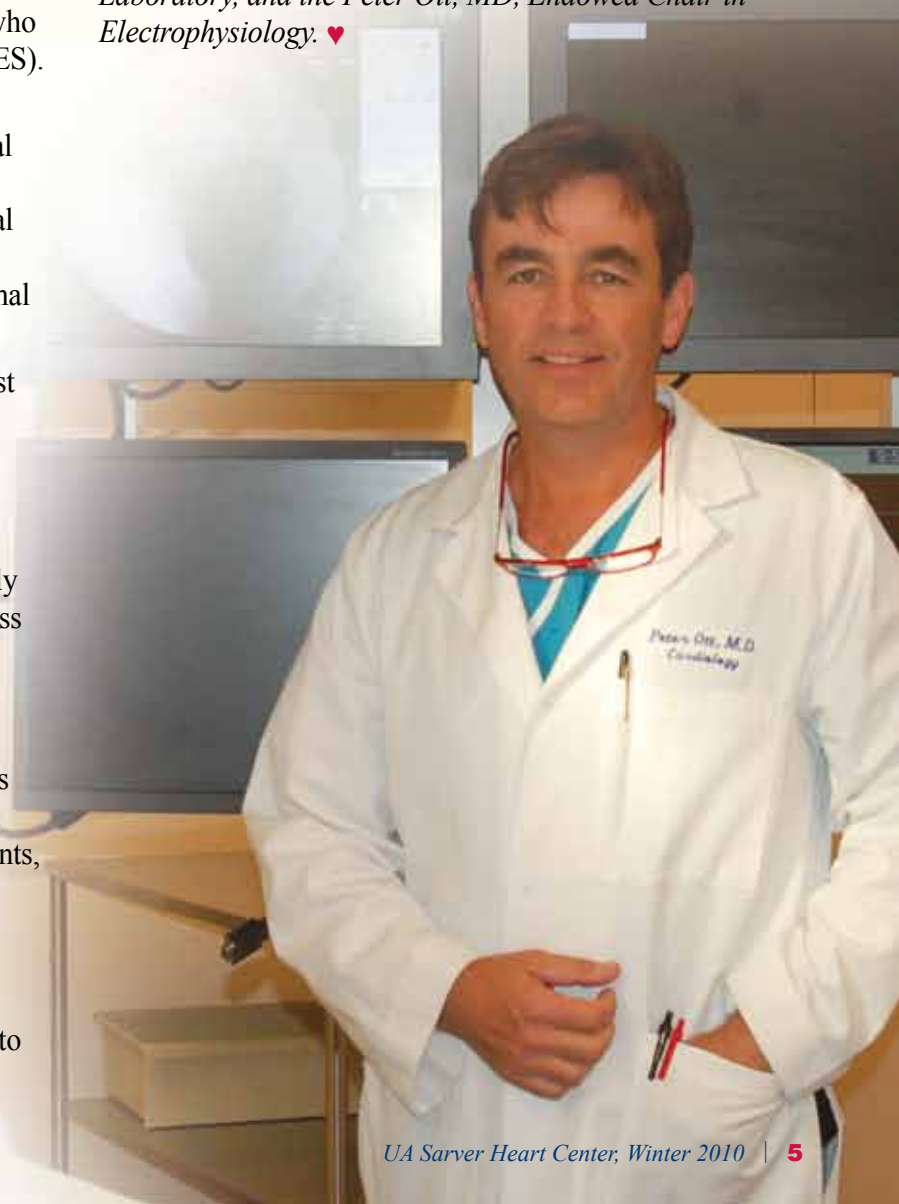
**Cardiac pacemakers** are sometimes used with medication to manage atrial fibrillation, particularly if these medications result in slowing the heart rate too much, but are needed to keep the heart rate from beating too fast.

In selected patients catheter ablation (or cauterizing) of the AV node is performed. These patients all require cardiac pacing before such therapy. This procedure eliminates fast and irregular heart rates, often making medications unnecessary. Anticoagulation medication (Coumadin) is still required to prevent strokes.

**Prevention:** Since atrial fibrillation is strongly linked to hypertension and heart disease, every effort should be made to avoid these conditions by healthy lifestyle choices, smoking cessation, regular exercise and only modest alcohol use. Once hypertension or heart disease is present, aggressive medical therapy is mandatory.

Helpful resources are available from the Heart Rhythm Society <http://www.hrsonline.org/PatientInfo/>

*Dr. Ott is associate professor of medicine; director of University Medical Center's Cardiac Electrophysiology Laboratory, and the Peter Ott, MD, Endowed Chair in Electrophysiology. ♥*



# Seed Grants and NIH Funding Updates



Alfie Norville, Henk Granzier, PhD, Allan Norville

## Research Identifies Potential Path to Drug Targets to Minimize Heart Attack Muscle Damage

A heart attack due to blockage of a coronary artery causes heart muscle damage that is progressive during the next few hours. The sooner this blockage is relieved, the less the heart muscle is damaged (time is muscle). Unfortunately reperfusion (resuming the blood flow) does not immediately stop the damage. This is known as ischemia/reperfusion injury.

Basic research scientists recently discovered intracellular mechanisms responsible for ischemia/reperfusion injury, paving the way for drug targets to inhibit and potentially minimize heart damage.

Sarver Heart Center member **Henk Granzier, PhD**, professor of physiology and biomedical engineering at the UA College of Medicine, collaborated with **Richard Schulz, PhD**, professor of pediatrics and pharmacology at the Cardiovascular Research Center at the University of Alberta, Canada, to discover a possible major breakthrough. Their research, which was funded by the U.S. National Institutes of Health and the Alberta Heritage Research Foundation, is reported in the Nov. 2, 2010 issue of *Circulation*.

Through painstakingly complex basic research studies,

the research teams discovered that matrix metalloproteinases (MMPs) localized inside the cardiac muscle cell on a specific region of the largest-known protein (titin) to cause heart-cell damage. On ischemia/reperfusion injury, MMP is activated and breaks down titin, impairing its crucial roles in the muscle function of the heart. Importantly, pharmacologic inhibition of MMP-2 reduces the damage, explains Dr. Granzier, the *Allan and Alfie*

*Norville Endowed Chair* in Sarver Heart Center's Molecular Cardiovascular Research Program and a member of the UA's BIO5 Institute.

Dr. Granzier is a leading investigator in the pathophysiology of titin and was a collaborator and major contributor to this important basic research discovery.

“From a clinical perspective, this research has the potential to lead to the development of medicines that would be used with clot-busting drugs or cardiac catheterization to minimize heart muscle damage from a heart attack. This is an exciting finding and an excellent example of the University's emphasis on bench-to-bedside research,” said Gordon A. Ewy, MD, director of the Sarver Heart Center. ♥

*“When we funded this endowed chair, we had no idea it would lead to something so significant so quickly.”*

*Alfie Norville*

# Researcher Studies High Blood Pressure Causes and Therapies

**H**ypertension (high blood pressure) is one of the most common health problems in the world, one that affects about one-third of Americans. Left uncontrolled, it can lead to heart and kidney failure as well as stroke.

While doctors can easily measure and treat hypertension with drugs, they don't always know what causes the disease. With private support from some very special donors, a Sarver Heart Center researcher has shown that suppression of selected white blood cells of the immune system (namely subpopulations of lymphocytes) can completely inhibit the development of hypertension. Seed grants from these donors totaling \$50,000 since 2006 have grown into a \$1.5 million four-year grant from the National Institutes of Health, awarded to Sarver Heart Center member Douglas F. Larson, PhD, professor of medical pharmacology and cardiothoracic surgery at the UA College of Medicine.

His research of the immune-system also helped develop early anti-rejection regimens that made possible the success of the UA's world-renowned cardiac transplantation program. His observations in the transplantation arena showed a marked incidence of hypertension in transplantation patients who receive anti-rejection therapeutics. This led him to study the role of lymphocytes in hypertension.

Dr. Larson says, "The immune system's role in cardiovascular disease has lacked the thorough investigation compared to research of the nervous and endocrine systems. Therefore we have a unique

opportunity to make some very significant breakthroughs in cardiovascular disease at the Sarver Heart Center. The first goal of our new NIH study is to define how the lymphocytes regulate arterial blood vessel stiffness. The long-term goal is to develop new therapeutics that will treat hypertension by manipulating the immune system."

## Made Possible with Donor Support

"This NIH grant would not have been possible without the support of generous donors who provided funds for a research pilot study that allowed me to obtain preliminary data. These smaller grants are so critical to the scientific process that could lead to major breakthroughs in treating cardiovascular diseases, such as high blood pressure," says Dr. Larson.



*Del Steinbronn, MD, Karen Steinbronn, MD, Doug Larson, PhD, Sandy Katz MD, JD, and Diane Stephenson*

His research was funded by donations from Drs. Del and Karen Steinbronn, Dr. Sandy Katz and Diane Stephenson.

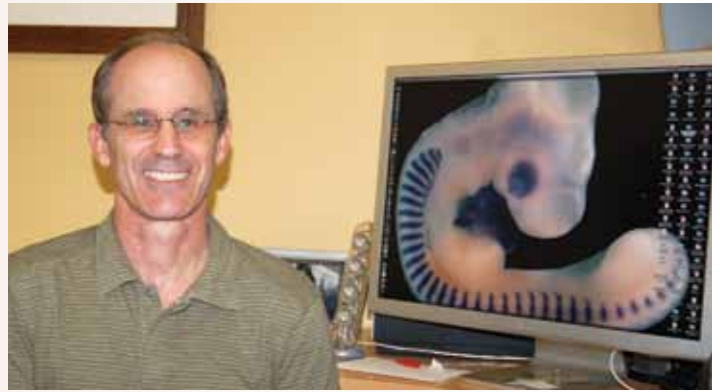
The Steinbronns were inspired to support Dr. Larson's research on heart failure after their 20-year-old daughter's heart condition was treated here without surgery, using only medical intervention. Since hypertension is the root cause of heart failure, progress in preventing high blood pressure from the start will reduce the incidence of heart failure. Sandy and Diane are active members of the Sarver Heart Center Women's Heart Health Education Committee and are very interested in advancing the understanding of cardiovascular disease. ♥

# NIH Grant Renewal at UA Helps Scientists Worldwide

The chicken embryo develops similarly to a human embryo, and each contains about 20,000 genes. Researchers around the world are studying where and when these genes are used during embryo development in organisms such as chickens to increase their knowledge of how certain human birth defects, such as congenital heart defects, are set in motion. Information about when and where genes are used is spread across hundreds of thousands of research publications. This creates a huge problem for researchers looking for information about genes that might be involved in the processes leading to birth defects.

Fortunately, researchers led by Parker Antin, PhD, professor of cell biology and anatomy and UA Sarver Heart Center member, recognized this problem, and 10 years ago developed a database available to scientists around the world to hold this information. Dr. Antin recently received a five-year \$3.8 million NIH grant to advance this project—the Gallus Expression in Situ Hybridization Analysis (GEISHA).

“The amount of information that is vital to daily research is overwhelming, and we are becoming ever more reliant on biological databases to help us make sense of all of the data. Since congenital defects arise due to problems that occur as the embryo develops, obtaining and organizing information about when and where genes are used is crucially important. In some



*Parker Antin, PhD, manages international chicken embryo genetic database*

ways human development is like building a car—one part might go wrong and it will affect the whole system. Through genetic studies, we are learning the function of every gene and where it appears during the development process. We need to understand the normal state in order to work on defects,” says Dr. Antin.

He explains that congenital defects usually are genetic mutations, with heart defects being the most common. Some manifest over time; others genetically predispose a person to a disease. Dr. Antin adds, “We look at all the players in cells that could be a factor in disease. Which genes are active during blood vessel development? Which ones make heart cells versus nerve cells?”

From here, it may be possible to develop therapeutic approaches to preventing congenital defects and human disease.

Dr. Antin’s research has been supported by seed grants from the *William J. “Billy” Gieszl Endowed Award for Heart Research* and the *Michael Schneider Investigator Award for Pediatric Cardiovascular Disease Research*.♥

## A Heart-breaking Side Effect of Cancer Therapy



*Sylvia Sohn Um*

At age 20, Sylvia Sohn Um was a promising poet and musician, studying English at the University of Arizona where she began to accumulate honors, including the Arizona Regents’ Academic Achievement Award, a University of Arizona Fine Arts Scholarship,

the Hattie Locket Poetry Award and the Outstanding Senior Award from the College of Humanities. An accomplished pianist and violinist, she performed with the Arizona Symphony Orchestra and Arizona Opera Company. She also entered a battle for her life when she was diagnosed with non-Hodgkins lymphoma.

After three years of chemotherapy, Sylvia’s cancer was in remission, but she developed type 1 diabetes and frequently was sick, says Sylvia’s younger sister, Sandra Um, director of development for UA presents. “She lost lung capacity, had swollen legs and much





*Wanda Moore (red jacket) with the Briehl lab team (from left to right) Heather Tardif, Melba Jaramillo, Kristy Lee, Margaret Tome, PhD, and Margaret Briehl, PhD.*

tiredness,” explains Sandra. Unfortunately her primary care doctor treated Sylvia for lung infections and blamed the symptoms on Sylvia’s mother, who was a Korean immigrant, saying, “Your mother is stressing you out; try to relax.”

In a story too often heard about women and heart disease, the primary care doctor initially minimized Sylvia’s symptoms. At age 28, during her second year in the Master of Fine Arts program in poetry at the University of Maryland, Sylvia died of congestive heart failure caused by cardiotoxicity (heart muscle cell damage) following chemotherapy.

“Women really need to take charge of their health. If it doesn’t seem right, you should see a group of specialists,” says Sandra.

Advances in cancer treatment have led to many cures, but the side effects often bring about another battle—heart disease, specifically cardiomyopathy that is caused by cardiotoxicity. “Unfortunately, the same chemicals that fight cancer cell growth also can destroy heart cells,” says Margaret Briehl, PhD, professor of pathology and Sarver Heart Center member, who has shifted her research focus from cancer treatments to finding a drug that protects the heart during chemotherapy.

Cardiotoxicity from chemotherapy is more likely to affect women, especially African-American women, people at extremes of age (children and the elderly) and people with high blood pressure, diabetes and pre-

existing heart disease, says Dr. Briehl.

### **Minority Outreach Program Grant**

Dr. Briehl’s research is funded in part by a seed grant from the Sarver Heart Center’s newly formed Community Coalition for Heart Health Education for Women of Color (Minority Outreach Program). She is studying an experimental drug that shows promise for protecting heart cells when cancer is not present. The next step is to see if the same protection occurs when cancer is present.

“This research is so important, and it’s the reason the Minority Outreach Program is active in the community, working to educate women of color about heart disease and the need to increase funding for research that focuses on our unique heart issues,” says Wanda Moore, chair of the Minority Outreach Program. “Our goal is to provide educational information on women’s heart health to our communities with particular emphasis on the traditionally underserved populations.”

The Minority Outreach Program is funding another seed grant that is focused on measuring the relationships among inflammatory genes, blood markers and traditional risk factors in African Americans with ischemic stroke. The coalition envisions a long-term, sustainable research program in heart health and cardiovascular disease inclusive of all “women of color.”

For more information, please call the UA Sarver Heart Center’s Development Office at (520) 626-4146. ♥

# Sarver Heart Center Celebrates Legacy Gifts

Margaret Richardson and Jim and Linda Lee have established endowments to benefit the Sarver Heart Center through charitable gift annuities. Their gifts will support different aspects of our battle against heart disease — and provide them income for the rest of their lives. (See information below on “Charitable Gift Annuity.”)

“These families have made important financial decisions; to maximize their return on investments during their lifetime, while making a difference in perpetuity by supporting the Sarver Heart Center’s commitment to a future free of heart and vascular disease,” says Dr. Gordon A. Ewy.”

## Margaret and Howard Richardson

The Richardson gift will fund the *Howard G. and Margaret C. Richardson Endowed Chair in Cardiology*. Robert N. Shelton, president of the University of Arizona, has stressed the importance of endowed faculty positions. Indeed, it will be these private and public partnerships that will keep the University of Arizona competitive in recruiting the best faculty.

## Jim and Linda Lee

“Having a fund that is focused on research endeavors is very important,” says Carol C. Gregorio, PhD, co-director of Sarver Heart Center. “While the need for new equipment, better software and space will always be present — often the resources simply aren’t there. Jim and Linda recognize this and have really done something extraordinary.” *The Jim and Linda Lee Memorial Endowment* will help future researchers and scientists take their research in cardiovascular disease to new heights. “Jim and Linda are such special people. This fund reflects the entrepreneurial spirit that has made them successful,” adds Dr. Gregorio.

## 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.

The rate of return shown in the chart is based on one life. Please call for information on two lives. ♥



Margaret and Howard Richardson



Jim and Linda Lee

Your Age	Rate of Return
65	5.5%
70	5.8%
75	6.4%
80	7.2%
85	8.1%
90	9.5%

# Sarver Heart People Briefs



UA President Robert Shelton, Dr. Ewy, and Jon Underwood, chair of UA Foundation Board of Trustees

## UA Foundation Honors Dr. Ewy with Sander Award

Congratulations to Gordon A. Ewy, MD, director of UA Sarver Heart Center, who was named by the UA Foundation as the recipient of the 2010 Eugene G. Sander Endowed Faculty Fundraising Award.

“Dr. Ewy is a true gentleman, a masterful administrator and a caring physician. While he does not think of himself as a fundraiser, his kind heart and passion for helping people make a strong case for investments in the Sarver Heart Center. He recognizes that it is not what the University needs, but rather what the donor is seeking to affect that is the essence in attracting private support,” says James H. Moore Jr., president and CEO of the UA Foundation.

The Sander award was established by the UA Foundation Board of Trustees in 2008 to honor UA faculty who set examples among their peers for upholding high standards of performance in fundraising and development efforts. It is named for longtime UA dean of the College of Agriculture and Life Sciences, Eugene G. Sander, PhD, who has been an advocate and leader for involvement in the fundraising process for more than two decades.

## Gregorio Serves on NIH Review Committee



Carol Gregorio, PhD, co-director of UA Sarver Heart Center, is a member of the National Institutes of Health’s Cardiac Differentiation and Development Study Section, which reviews research applications related to cardiac disease and development. “Funding is so tight; it’s very important to fund significant projects

that can make a difference in fighting cardiovascular disease,” says Dr. Gregorio.

## Hall Memorial Award Recipients

Joseph Stephen Alpert, MD, professor of medicine and director of University Medical Center’s Coronary Care

Unit (center), presented the *Charles W. Hall Jr. and Virginia C. Hall Memorial Award* to Department

of Medicine residents Alexander Trujillo, MD, and Larissa Allen, MD.

The award includes a monetary stipend and recognizes outstanding residents on the coronary care unit rotation. Next year the award will be expanded to recognize two residents from the College of Medicine’s Phoenix Campus. This award was established to inspire young physicians to perpetuate the excellence of the Sarver Heart Center in memory and celebration of the Hall family legacy.



## Isabelle Preiss Honored at Retirement Reception



For 31 years patients and visitors to the Sarver Heart Center were greeted by the warm smile and calm wisdom of Isabelle Preiss. When she started working here, the Sarver Heart Center was a dream on the horizon, Dr. Mark Friedman was a cardiology fellow, Dr. Gordon Ewy was a promising up-and-coming cardiologist and Dr. Mark Friedman was the first cardiology fellow. This fall at age 81, she decided it really was time to retire and spend more time with her husband, family and Las Vegas—her three greatest loves outside the Sarver Heart Center. During her retirement reception, Isabelle was honored with the *Brian Bateman Superb Service Award* that recognizes those who often work behind the scenes, are always optimistic and generally strive to remove barriers — all in an effort to help improve relationships with the patients, visitors, donors, colleagues and friends of the Sarver Heart Center. ♥

ADDRESS SERVICE REQUESTED

## Join Sarver Heart Center Members for the Green Valley Lectures

- Thursday, Dec. 16, 2010** *Cardiovascular Tests and Results: What are we looking for and what happens next?*  
**Karl B. Kern, MD**, professor and chief of cardiology, the University of Arizona College of Medicine
- Thursday, Jan. 20, 2011** *Preventing Heart Attacks*  
**Gordon A. Ewy, MD**, professor of cardiology, the University of Arizona College of Medicine; director of UA Sarver Heart Center; the *Gordon A. Ewy, MD, Distinguished Endowed Chair of Cardiovascular Medicine*
- Thursday, Feb. 17, 2011** *Different Strokes for Different Folks....stroke risk, prevention and treatment in diverse populations*  
**Leslie Ritter, PhD, RN, FAAP**, professor, the University of Arizona College of Nursing and Department of Neurology
- Thursday, March 17, 2011** *Abnormal Heart Beats*  
**Peter Ott, MD**, associate professor of clinical medicine, the University of Arizona College of Medicine; director, Cardiac Electrophysiology Laboratory; and the *Peter Ott, MD Endowed Chair of Electrophysiology*

Free and open to the public. Presentations are held Thursdays at 10 a.m. at Canoa Hills Social Center, 3660 S. Camino del Sol, Green Valley. No reservation required. Refreshments provided.

## Save the Date!

### Sarver Heart Center Healthy Heart Conference:

Join us **Saturday, Feb. 12, 2011**, for the **Annual Healthy Heart Conference** in DuVal Auditorium at University Medical Center in Tucson from 8 a.m. to noon. Learn about the Resuscitation Research Group's protocols that are saving lives in Arizona and a growing number of states and countries. Find out why strokes are not an equal-opportunity affliction. Get empowered to understand how you can prevent heart disease by knowing how it strikes different genders and ethnic groups. Learn the latest about arrhythmia diagnosis and treatment. Visit [www.heart.arizona.edu](http://www.heart.arizona.edu) for registration information. Or, watch your mail for details next month. The \$15 registration fee covers a continental breakfast, health screens, materials and snack.

### Heart of the Matter Luncheon focused on Women and Heart Disease:

**Saturday, Oct. 15, 2011**