

S A R V E R
H E A R T
C E N T E R

Spring 2002

Issue 33

The Gordon A. Ewy, MD, Endowed Chair of Cardiovascular Medicine

It is rare and unique for a faculty member to occupy an endowed chair in his or her own name. This spring, the director of the UA Sarver Heart Center will do just that.

Last April, a grateful patient of Gordon A. Ewy, MD, made an anonymous \$1 million gift to honor him and to contribute to excellence at the UA Sarver Heart Center. The donor specified that at least an additional \$1 million be raised within a year's time in order to fully fund the endowed chair. The contribution was made with the stipulation that the chair be named The Gordon A. Ewy, MD, Endowed Chair of Cardiovascular Medicine and that Dr. Ewy occupy the chair until his retirement.

This endowed chair now is fully funded, thanks to patients of Dr. Ewy and friends of the Sarver Heart Center. A Campaign Arizona celebration will be held April 5 at the Westin La Paloma. In attendance will be the more than 200 families that have contributed to the endowment. Additional contributions to the chair will help meet ongoing needs in education and research.

The endowment is a permanent fund held and managed by the University of Arizona Foundation. The Foundation Board annually sets a "payout rate" and guarantees that this amount (primarily interest income generated from the endowment) is allocated annually to support the scholarly pursuits of the chair holder. The principal grows to keep up with inflation, assuring that the relative value of the endowed chair remains constant.

Gifts of endowed chairs through Campaign Arizona are considered the ultimate support of educational and research missions across the University campus. As noted above, the interest income earned beyond the annual payout is returned to the principal so that the chair continues to grow over time.



Gordon A. Ewy, MD

"We are proud that our performance over the last 14 years has averaged 12 percent. That places us at or above most public universities," according to Gary Scrivner, PhD, Vice President of Finance for the University of Arizona Foundation.

Currently, four faculty members affiliated with the Sarver Heart Center occupy endowed positions; recruitment is under way for two other endowed positions. Endowed faculty positions are a key priority of Campaign Arizona, a seven-year effort to raise funds to support University of Arizona programs. ♥

Gordon A. Ewy, MD

Gordon A. Ewy, MD, has been the director of the Sarver Heart Center since 1991. As director, he redefined its mission and vision, recruited more than 100 physicians and scientists, recognized their 10 research focus areas, developed outreach programs, including the newsletter and public lecture series, and helped in a successful fund-raising drive to finance the now new Sarver Heart Center building.

“The strengths of the Sarver Heart Center lie in the quality of its members and our co-workers, and our shared commitment to a future free of heart disease, vascular disease and stroke via the academic principles of research, education and patient care,” Dr. Ewy says. “To build on this solid foundation, we recognize the importance of endowments to attract additional world-class scientists who share in our dream to the Sarver Heart Center.”

Dr. Ewy is also Professor and Chief of Cardiology at the University of Arizona College of Medicine, and Director of the University of Arizona Cardiology Fellowship Training Program. He obtained his BA and MD from the University of Kansas, and completed his residency and cardiology fellowship training at Georgetown University. He was on the faculty at Georgetown University until he came to Tucson in 1969 as one of the founding members of the Section of Cardiology of the then new University of Arizona College of Medicine.

Dr. Ewy has made significant research contributions in several areas, including the pharmacokinetics of digoxin, defibrillation and cardioversion, cardiopulmonary resuscitation (CPR), and hemodynamic correlates of cardiovascular physical findings. For his many contributions in the field of defibrillation and cardiopulmonary resuscitation, the American Heart Association recognized him in 2000 as a “CPR Giant,” a title held by a select group of scientists around the world.

A Fellow of both the Council on Clinical Cardiology of the American Heart Association and the American College of Cardiology, Dr. Ewy has served in various capacities in both organizations, including the Board of Trustees and Chairman of the Learning Center Committee and the Emergency Cardiac Care Committee of the ACC. Dr. Ewy is on the editorial board of three medical journals.

A former teaching scholar of the American Heart Association, Dr. Ewy has received a number of teaching awards, including the Furrow Award for Excellence in Postgraduate Education. He has been invited as a Visiting Professor to several medical schools, including the W. Proctor Harvey Visiting Professorship at Georgetown, The Lemberg Visiting Professorship at the University of Miami and is one of the Seymour Medalists as a Visiting Professor at the University of Kansas.

He helped create the instructional material for the teaching mannequin “Harvey,” developed by his colleague Michael S. Gordon, MD, PhD, at the University of Miami.

Dr. Ewy has had an active cardiology practice in Tucson since the opening of the University Hospital in 1971 and is listed in several publications as one of the “Best Doctors in America.”

Dr. Ewy is the author/editor of four books, four monographs, and more than 400 original scientific publications, editorials, book chapters and reviews.

He served in the U.S. Navy as an ensign and first lieutenant aboard the USS Begor, APD 127. He was a line officer, but not a medical officer as he was in the service before going to medical school. According to Dr. Ewy, his greatest accomplishment was convincing Priscilla R. Welbon to marry him! It took three years of letter writing; they were engaged by a trans-Pacific telephone call. They have three children, Kim Elizabeth, Gordon Stuart, and Mark Allen.

Campaign **ARIZONA**
FOR A PREMIER UNIVERSITY EXPERIENCE

Endowed Chairs and Professorships Held by Sarver Heart Center Members

**The C. Leonard Pfeiffer
Endowed Professor
of Internal Medicine**
Eugene Morkin, MD

**The American Heart
Association/Flinn
Foundation Endowed
Chair in Cardiac
Electrophysiology**
Frank I. Marcus, MD

**The Robert S. and
Irene P. Flinn Endowed
Chair in Internal Medicine**
Joseph S. Alpert, MD

**The Michael Drummond
Endowed Distinguished
Professor in Cardiovascular
and Thoracic Surgery**
Jack G. Copeland, MD

**The Allan C. Hudson and
Helen Lovaas
Endowment for Excellence**
Recruitment Under Way

**The William M. Feinberg,
MD, Endowed Chair in
Stroke Research**
Recruitment Under Way

For more information about
endowments, please call the
Sarver Heart Center Office of
Development at (520) 626-4146.

At right, a Healthy Heart participant listens to a presentation. Pictured below are some of the volunteers who helped at the event. Back row: Linda Covington, Karen Hart, Merissa Hart and Mary Jane Clabots. Front row: Jane Dow and Cass Martinez.



HEALTHY HEART

a public education experience

Sarver Heart Center doctors and scientists shared the latest information on preventing heart disease and stroke at the Healthy Heart public education conference, held at University Medical Center in February.

The annual event gives members of the public an opportunity to learn about new treatments for cardiovascular problems, and to learn about the directions that researchers are taking in the fight against heart disease.

Taking part in this year's conference were: Gordon A. Ewy, MD; Jack G. Copeland, MD; Bill Buchsbaum, MD; Peter Ott, MD; Lorraine Mackstaller, MD; Paul McDonagh, PhD; Lawney Snyder, MS, MBA; Debbie Pesicka, RD; Ray Runyan, PhD; Ann Baldwin, PhD; and J.J. Hedden.

The 2003 Healthy Heart conference is scheduled for Feb. 8. If you'd like to be added to the mailing list to receive information about the event, please call 626-4083 or e-mail your address to pila@u.arizona.edu.



Conference participants chat during a break.

Researchers Stress Constant Chest Compressions

Survival after cardiac arrest would be greatly improved if chest compressions were delivered continuously without pausing to give breaths, the Sarver Heart Center's CPR Research Group reports in an article published in *Circulation*.



The CPR Research Group includes, from left, Arthur B. Sanders, MD, Gordon A. Ewy, MD, Robert A. Berg, MD, Ronald W. Hilwig, DVM, PhD, and Karl B. Kern, MD.

“Any technique that minimizes lengthy interruptions of chest compressions during the first 10 to 15 minutes of BLS (basic life support) for adult victims of witnessed cardiac

sudden death should be given serious consideration,” the group states in the Feb. 2 issue.

Concerned about a decrease in bystander CPR, presumably due to fears about mouth-to-mouth breathing, the American Heart Association has called for a simplified CPR technique.

Researchers, meanwhile, have been concerned about the effect that the pauses were having on the blood flow that was being generated by the chest compressions. When the compressions stop, the flow stops.

The research group and other laboratories have shown in the past that eliminating mouth-to-mouth ventilation in the early stages of bystander-provided CPR – thus making it less objectionable to laypeople – is just as effective as standard CPR that includes ventilation.

Now the Sarver Heart group has shown that it appears to be even better.

“This is the first report of adverse outcome resulting from prolonged

pauses in CPR chest compressions for the delivery of mouth-to-mouth ventilation,” the group reports.

The new finding is due to a realization the group had about bystander CPR: It takes bystanders longer to pause for breaths than researchers had estimated.

In laboratory studies, researchers had been simulating bystander CPR by doing 15 chest compressions and then pausing to give two breaths, allowing about five seconds total for the breaths. But a study in the United Kingdom found recently that bystanders take closer to 16 seconds to administer breaths.

When the Sarver Heart Center group studied the effects of a 16-second pause, the results were dramatically in favor of continuous chest compression CPR over standard CPR.

“The central message is ... clear, namely, that interruptions of chest compression can compromise resuscitation-generated circulation and ultimately 24-hour neurological recovery after CPR,” the group concluded. ♥

Congratulations, Nina!



Heart transplant recipient Nina Gibson, in the center of the photo at left, recently was presented with a T-shirt to commemorate the 500-plus miles she has walked with her new heart. Pictured with her, from left: Gordon A. Ewy, MD, her daughter Lindsay Luke, her husband Nick Gibson and Lawney Snyder.

New SHC Member Looks to Improve ECG Diagnosis

Improving the detection of heart attacks that occur on the back of the heart so that patients can get treated earlier is at the center of the research of Shu-Fen Wung, PhD, RN, one of the newest members of the Sarver Heart Center.

When Dr. Wung came to the University of Arizona last summer, she brought with her a \$1.7 million grant from the National Institutes of Health to study the potential benefits of modifying the electrocardiogram in order to see more signals coming from the back, or posterior, of the heart.

In a standard electrocardiogram – a recording of the heart’s electrical activity on a moving strip of paper – the data is collected from 12 “leads,” which are attached to the front of the torso. In Dr. Wung’s study, additional leads are placed on the patients’ backs.

“This method is not difficult because we can use the current ECG machine and just record extra signals,” Dr. Wung says. “Hopefully, the study results will support the use of the additional leads, and help define the normal and abnormal signs on those leads.”

The idea for the research came when Dr. Wung noticed that a percentage of people who come into emergency rooms get misdiagnosed because “they don’t have the traditional presentation on the electrocardiogram.”

These are patients who suffer heart attacks to the back of the heart, an area not picked up by a standard ECG. About 4 percent to 5 percent of patients have heart attacks that occur only in the back of the heart, while about 15 percent to 20 percent have heart attacks that occur in the back as well as the bottom or left side, the most common areas.

“It’s about 28,000 patients a year” who are at risk of being misdiag-



Shu-Fen Wung, PhD, places ECG leads on the back of Steve Goldman, MD, who is assisting in her research. At right are other members of the research team: Joel Goldstone, MD, Hoang Thai, MD, and Mary Ann Bell, PhD, RN.

nosed, says Dr. Wung, an associate professor in the UA College of Nursing. “We wanted to be able to pick those other patients up.”

An incorrect diagnosis in those patients, she says, could lead to potentially harmful treatment, and a delay in receiving the appropriate treatment.

The four-year study, called “New Electrocardiographic Criteria for Posterior Myocardial Infarction,” will examine ECG data from about 1,200 heart attack victims at the Southern Arizona Veterans Health Care System and University Medical Center.

Dr. Wung began her career as a charge nurse in Taiwan, working for a few years before enrolling at the University of Dubuque, where she received a bachelor’s degree in nursing. She continued on to the University of California, San Francisco, where she entered a master’s program in cardiovascular nursing.

It was there that she became interested in research. She was working with a nurse who had an NIH grant to study ECG monitoring of patients in

the intensive care unit and emergency department. “I thought, ‘This is really great clinical research for nurses.’ That’s what nurses do on a daily basis – they monitor patients and they notify physicians if a problem needs to be solved.”

Dr. Wung went on to complete a doctorate in nursing from UCSF and worked as an assistant professor at the University of Illinois at Chicago in the Department of Medical-Surgical Nursing for a few years before coming to the UA.

Dr. Wung was drawn to Tucson partly because the Tucson VA was a good environment for her research and partly because she has family and friends here. Being part of the Sarver Heart Center is an added benefit, she says.

“This is a great area to find people to collaborate with on research,” Dr. Wung says.

As a member, Dr. Wung hope to foster more appreciation for nursing research. “We do contribute a different aspect of health care.” ♥

Trust is Critical in Conducting Clinical Research

The public's trust in clinical research has decreased in recent years, a trend that must be stopped in order to continue making breakthroughs in health care, says N.A. Mark Estes III, MD, the fifth Samuel and Edith Marcus Visiting Professor.

"We are at a critical juncture," Dr. Estes, an expert in the protection of human study subjects, said during a dinner held in his honor at the DoubleTree Hotel at Reid Park in February. "Maintaining the public trust is essential for us to move ahead

with the many very important achievements that we've had in clinical research over the last 50 years."

Dr. Estes, director of the Cardiac Electrophysiology Laboratory at Tufts-New England Medical Center, has been a member of that institution's Human Investigation Review Committee since 1984. Human investigation boards review proposed clinical research projects for safety and efficacy.

The decline in trust partly is due to some high-profile events in which patients were harmed in clinical trials. Another reason is that clinical research has focused too much on the minutiae of regulations, rather than the spirit behind them, Dr. Estes said.

"The culture right now is one of compliance. We have regulations, oversight bodies. But without well-

informed, well-intended investigators to understand the reasons for the regulations, we really are not going to make any progress," Dr. Estes said.



Back Row: Frank Marcus, MD, Janet Marcus, Mark Estes, MD, Martin Lapidus, Shirley Marcus Feinberg, Judge Wilfred Feinberg. Front Row: Ann Marcus Lapidus and Lynn Marcus.

Regulatory bodies are charged with ensuring that a trial's benefits outweigh the risks, that the research is being conducted by qualified physicians and scientists and that there are no expectations of death or injury.

Investigators, Dr. Estes said, should be focused on the best interests of each and every patient. "Ultimately, the responsibility for the safety of the patients is in the hands of the individual clinical investigator."

That begins with enrollment of patients, he said, explaining that the consent process should really be a discussion in which the physician explains the nature of the patient's condition, the purpose of the trial, the patient's options and affirmation that participation in the trial will not influence their medical care.

"We need to shift our emphasis

toward trust," Dr. Estes said, "because trust is absolutely key. Without trust, the integrity of medicine and medical research will suffer, the public

won't support medical research" and progress will be hindered.

At the same time, clinical investigators need to change a standard practice in which they cannot publish a trial's results unless they have the approval of the trial's sponsor, such as a pharmaceutical company, he said.

"One of the things that we need to do as researchers and institutions

is absolutely demand that these contracts give us complete autonomy with regard to publication," Dr. Estes said.

Without that autonomy, he explained, sponsors could suppress information about trials with poor outcomes or adverse events.

The Samuel and Edith Marcus Visiting Professorship was established in 1997 by the children of the Marcuses, including Frank I. Marcus, MD.

Samuel and Edith Marcus, Jewish immigrants from Russia and Poland respectively, were devoted to the education and welfare of their children. In that same spirit, the visiting professorship endowment aims to bring leaders in the medical world directly to campus to speak with staff, residents and students. ♥

Dr. Williams Studies Ways to Grow Heart Muscle

What if there were an endless supply of heart muscle for everyone who had heart failure or needed a transplant? What if no one had to lose a life in order for someone else to have a second chance to live their own?

Research in the laboratory of Stuart K. Williams, PhD, is aiming to do just that.

Using adult stem cells, Dr. Williams and other bioengineering researchers are studying ways to grow functional human heart tissue to repair damaged hearts – an undertaking that could lead to the development of tissue-engineered replacement heart muscle and tissues for other major organs.

Under a \$4 million study, funded by the National Institutes of Standards and Technology (NIST), Dr. Williams' lab is focusing on culturing "patches" of living tissue that could be grafted onto damaged hearts to induce growth of new heart muscle and blood vessels.

The research involves growing cells in three-dimensional structures – called "scaffolds" – instead of in laboratory dishes, explains Dr. Williams, professor and chairman of the UA Biomedical Engineering Program.

For the most part, cells grown in a flat dish tend to behave as individual cells. But when grown in a three-dimensional structure, the cells begin to behave as they would

in a tissue or organ.

"The hope is that these cell cultures will mature into fully functional tissues and organs," he says.

Researchers work with adult stem cells that have the ability to develop into specialized cells, such as cardiac cells. These cells could give scientists a virtual never-ending supply of cardiac cells for tissue engineering. And they may hold clues to solving the problem of organ rejection by using the patient's own cells to grow new organs, says Dr. Williams.

The effort represents a public-private collaboration with Advanced Tissue Sciences, a California-based tissue engineering company that develops and manufactures human-based tissue products for tissue repair and transplantation.

Results from some of this work were published in the Oct. 23 issue of *Circulation*, a medical journal published by the American Heart Association. ♥



Stuart K. Williams, PhD

"The hope is that these cell cultures will mature into fully functional tissues and organs."

HEART NEWS FOR YOU

Education Doesn't End After Medical School

By Gordon A. Ewy, MD
UA Sarver Heart Center Director

Number 10 on our list of ways to prevent cardiovascular diseases (heart disease, vascular disease and stroke) is an admonition to keep informed. For in medicine, the only thing that is certain is change. This was brought home most forcefully to me a few years ago. In 1982, my first book, "Cardiovascular Drugs and the Management of Heart

Disease," was published. At the time it was entirely up to date, and received very favorable reviews in the *New England Journal of Medicine*. However, writing and editing a book is an incredible amount of work. Although I took a six-month sabbatical to finish it, I was up all hours of the day and night on weekdays – and weekends – for several months. When I finished, my wife informed me in no uncertain terms, "No more books!" And I wholeheartedly agreed.

Then about eight years later, the publisher said it was time for a second edition. I clearly remembered Priscilla's instructions but I must admit the eight years had erased the memory of the effort that it took to write such a book. I rationalized that the entire book already was on the computer! All I would have to do for a second edition was to update a few areas, add a few new references and it would be done. So without too much thought, I said yes, but didn't mention it to my wife. A few months later it was time to get started. I went to the computer and started reviewing the chapters. A sickening feeling came over me as I went from chapter to chapter realizing that I could not use hardly any of what was written. Almost everything had changed in those eight years: the way we treated heart attacks, elevated cholesterol, elevated blood pressure, ventricular arrhythmias, atrial arrhythmias, cardiac emergencies, valvular heart disease, heart failure – and on and on. In short, I would have to start all over! It wasn't a pleasant evening when I had to confess to Priscilla. We got out the second edition, but it was much shorter.

The rapidity of change means that a cardiologist, trained in the very best medical school, would be practicing totally outdated medicine if he or she had not been keeping up via postgraduate education. Unfortunately, the speed with which medicine, and cardiology in particular, is changing is increasing. This fact is another reason why the Sarver Heart Center is dedicated not only to training the cardiologists and cardiovascular surgeons of tomorrow, but to keeping all dedicated cardiologists up to date via our postgraduate educational efforts.

You can all recite things that have changed. When I was in medical school, we were taught that gastric ulcers were due to not being loved – now we know that

Top 10 Ways to Prevent Cardiovascular Disease ... the Nation's No. 1 Killer

1. Take responsibility for your health
2. Know your risks for cardiovascular disease (heart and vascular disease and stroke)
3. Don't smoke
4. Maintain a normal blood pressure
5. Assure that your blood lipids (cholesterols and fats) are in the optimal range
6. Carefully select the foods you eat
7. Assure appropriate daily exercise
8. Be wise about each pill or tablet that you take, be they prescribed, alternative, a supplement or a vitamin
9. Minimize stress
10. **Keep informed – the only thing that is constant is change!**

The first eight items on this list were detailed in recent issues of the *Sarver Heart Center Newsletter*. For copies, please call (520) 626-4083.

HEART NEWS FOR YOU

many are caused by an infection. We were taught that a normal systolic (top number) blood pressure was 100 mmHg plus your age. We now know that a normal blood pressure of a 90-year-old is 120/80 mmHg. The “normal” maximum cholesterol values decreased over

The rapidity of change means that a cardiologist would be practicing totally outdated medicine if he or she had not been keeping up via postgraduate education

the past half century from 260 to 240 to 220 to 200 mg/dL. The changes in medicines, surgical techniques and devices such as pacemakers have re-

sulted in marked improvement in patient outcomes.

What about the future? For one thing, more direct and effective forms of gene therapy will be developed. One of the most exciting advances in the future will be tailored preventive lifestyle – medical and surgical therapy based on the individual’s genetic makeup.

The recently completed human genome project will provide information so that a “chip” can be implanted in individuals that will allow the analysis of our genes and predict who will have an increased susceptibility to a disease. Currently, our preventive therapy is shotgun and reactive. We tell everyone to follow the same lifestyle, or we treat hundreds of patients with a certain medicine so we can prevent a few deaths.

In the past, physicians would study a large group of patients and apply the results to everyone. For example, if I divided a room full of people in half and gave half of them reading glasses and then tested how well both groups could see, we would find that more people in the half with glasses could see better. That doesn’t mean that we should prescribe reading glasses for everyone, and yet this has been the way we have been interpreting clinical trials.

One size does not fit all! Except for identical twins, we are all different. Once we uncover the minute inborn differences that make some individuals particularly susceptible to certain diseases, we will be able to develop safer, more specific drugs that target the variety of biological quirks that underlie each major dis-

ease. We can make lifestyle recommendations that are tailored to the individual.

In the past, medicine was reactive, treating disease when it occurred. Presently we are proactive, actively trying to prevent disease. Now, by using expanded risk factor analysis, our therapy is better tailored. In the future we will be identifying individuals who have a high likelihood of developing a disease even more accurately and be able to prescribe better preventive therapy. Tailored preventive medical and surgical therapy will be much more effective.

A future free of cardiovascular disease will be exciting, but what can we do today? As we tell our medical students, a good family history is a poor man’s gene test; diseases tend to run in families. We have also identified a number of newer risk factors, so that preventive therapy can be tailored.

The past century was dramatic. The present is filled with opportunity to apply the preventive and therapeutic medical knowledge that we have acquired via evidence-based medicine and surgery to our patients. But one can confidently predict that we will witness even more dramatic medical breakthroughs in the first century of the new millennium!

As a patient, you should continue to take an interest in your health – by reading this newsletter, attending our public education programs and keeping current with credible medical sources, such as *The Harvard Heart Letter* and the Mayo Clinic’s *Housecall*.

The UA Sarver Heart Center is eager to play an important role in future changes, and we’ll continue to share breakthroughs and findings with you through this newsletter and our outreach programs so you can take advantage of new information as it is discovered. ♥

One of the most exciting advances in the future will be tailored preventive lifestyle – medical and surgical therapy based on the individual’s genetic makeup

Should Radial Artery Be Used for Bypass?

Sarver Heart Center surgeons and cardiologists are leading a nationwide study that should provide definitive answers about the effectiveness of a new method for coronary artery bypasses.

In most patients who undergo coronary artery bypass grafting, the left internal mammary artery is grafted to the left anterior descending coronary artery, the artery that runs down the front of the heart. That creates a detour around the blocked part of the coronary artery so that blood can still reach the heart muscle. If other vessels need to be bypassed, veins are taken from the legs.

In the study being undertaken at the Southern Arizona Veterans Affairs Health Care System – and up to 12 other VA medical centers nationwide – surgeons will study the effectiveness of using the radial artery, located in the arm, instead of a leg vein.

Some physicians believe that using the radial artery decreases the chance of narrowing because arteries have thicker walls than veins

and withstand pressure better, says Steve Goldman, MD, chief of cardiology at the Tucson VA and one of the doctors overseeing the study.

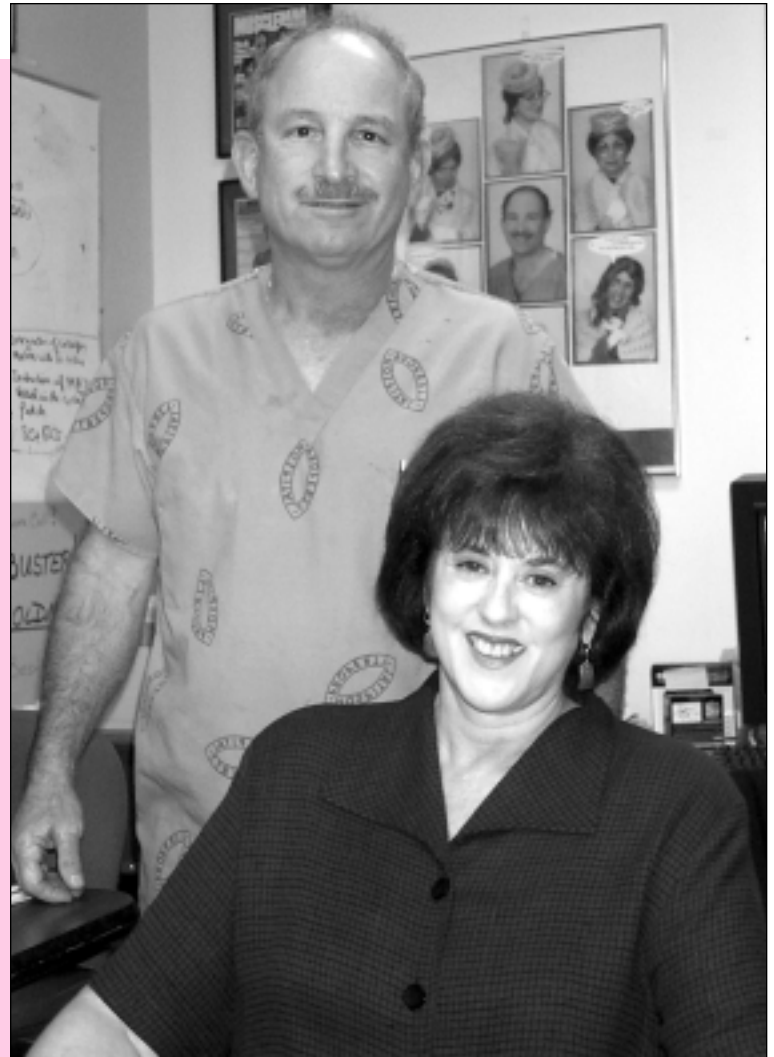
There also are indications that the recovery might be easier, Dr. Goldman says.

Using a leg artery for bypass grafting is not feasible because the leg has only one artery supplying the foot with blood, while the arm has two arteries supplying blood to the hand.

Surgeons have been using radial arteries more in recent years, but there has been little data showing that the arteries stay open longer than leg veins. Under the study, which will take place over four to five years, participating patients will be randomized into two groups, with half getting radial artery grafts and the other half getting leg veins grafts.

All of the patients will undergo cardiac catheterization a week after surgery and then a year after surgery to see whether the grafts have remained open.

The project is especially important given the fact



that more doctors are using the radial artery although there has been no solid data showing that it is preferable. There also has been some data suggesting that using radial arteries can cause damage to the arm's ulnar nerve.

Dr. Goldman and Gulshan Sethi, MD, UA professor of surgery, are the study's national principal investigators. Karen Zadina, RN, is the national coordinator. ♥

Steve Goldman, MD, is one of the physicians overseeing the study. Karen Zadina, RN, is the national coordinator.

Want to Quit Smoking? Try One of These Methods

By Richard J. McCarty, MD
Professor Emeritus
of Clinical Medicine

Either of these two techniques will get you off cigarettes within a few weeks – and at NO expense. No patches to wear, gum to chew or pills to swallow. All you need is your wristwatch for one method, and pencil and paper for the other, plus a clear desire to quit! The latter is of paramount importance so that you have within yourself the will to stick to the rules. If you play either “game” by the rules, you WILL SUCCEED. Both methods work by uncoupling you from your psychological attachment to cigarettes, the times, things and activities with which you crave a cigarette, and the automatic things you do to get one in your mouth. If you like, you may use both methods at the same time.

The Clock Method

You may have as many as 24 cigarettes per day. The catch is that you have only a one-minute window to light up – from the top of the hour until one minute past the hour. You may take as long as you like to smoke the cigarette, but you cannot light another until the top of the next hour. If you look at your watch and find it is two minutes after, too bad! After one or two weeks on this schedule, reduce your allowed number to just 12 per day, only on the even hours (2 o’clock, 4 o’clock, etc.). As the weeks go by, continue to cut the number – six per day, one every four hours, and then four per day, one every six hours) – until eventually you are allowed only two a day, at noon and midnight. By this time, most people will totally stop smoking, as their habit patterns of smoking with certain activities will

have been abolished – and more than enough time will have passed to be well beyond any nicotine withdrawal symptoms. Continuing to smoke a cigarette at noon and midnight won’t really have much of a negative health impact, but you will maintain the psychology of a smoker, one who feels that a cigarette is in some way a friend and a comforter, and in the future, when the going gets tough, you will likely resort to cigarettes for comfort.

The Wrap-Up Method

You’ll need a piece of paper, two rubber bands and a pen or pencil. Use the paper and rubber bands to securely wrap your pack of cigarettes – before you light up! The piece of paper should have several columns. Before you light a cigarette, you must enter the following data on the piece of paper: 1.) Current time 2.) What I am doing 3.) Why I want this cigarette and 4.) The part my body I wish to damage by the poisons inflicted by this particular cigarette: __ My Heart __ My Lungs __ My Brain __ My Legs.

Some part of you must take the hit and be damaged, permanently!

The careful wrapping and secure placement of two rubber bands makes

the process of getting a cigarette out of the pack and into your mouth (to be lighted only after the package is securely rewrapped), quite difficult, time-consuming and conspicuous. When you undertake the entire unwrapping/questionnaire/rewrapping process for each cigarette, you will, indeed, limit the number you smoke in any given day. The process will begin to uncouple you from automatic smoking responses during the day, as it will not be convenient or physically possible to do so on many occasions. The continual emphasis on the severe life-threatening health risk of each cigarette will give your intellect more of a chance to play the major role in deciding whether you want to continue a pathway of self-destruction or not. A wise monk once said, “Your body is like a Golden Temple. Treat it like one!” Don’t gunk up the works with the impurities and poisons of nicotine, tars and carbon monoxide.

Indeed, the body was not designed to require any of these things. It will hum along smoother and longer without them! Good luck! Don’t fudge on the rules! They are there for a purpose! ♥

Wording Your Planned Gift

As the highly public Campaign Arizona continues to increase support for cardiovascular research, some friends and supporters choose to plan their personal gifts in a confidential manner. If you wish to contribute in this way, please instruct your independent legal adviser to use the following language:

“I hereby leave (specific dollar amount or percentage of residuary estate) to The University of Arizona Foundation, an Arizona non-profit corporation, for the University of Arizona Sarver Heart Center, a division of the College of Medicine, to establish The (family name(s) of your choice) Research Endowment.”

You or your legal counsel may also seek assistance in planning your gift through a will or trust by calling The University of Arizona Foundation’s Planned Giving Office at (520) 621-1993 or 1-800-845-4877.

Fostering Discovery

Contributions to the Sarver Heart Center ensure continued progress in cardiovascular research. Here are four examples of the results that have been achieved through private support.

Mark and Emma Schiffman Endowment Fund

A research team led by Hoang Thai, MD, investigated how a specific drug works to prolong life in patients with congestive heart failure.

Congestive heart failure is a disease that is rapidly increasing in scope. Historically, the treatment of heart failure has been aimed at improving cardiac pump function. Unfortunately, this approach has had a limited effect on mortality. For this reason, other therapeutic targets have been investigated.

Specifically, drugs aimed at reversing the neuro-hormonal activation of the renin-angiotensin-aldosterone system (also called aldosterone antagonists) have demonstrated a significant survival advantage in patients with heart failure as well as an improvement in vascular function. Based on the current clinical literature, the use of an aldosterone antagonist, such as

the drug spironolactone, has shown promising results in reducing the rate of death in patients with heart failure. However, it is unclear how spironolactone works in reducing mortality.

A possible answer was recently discovered by Dr. Thai and fellow researchers Trung Tran, MD, Kent Meredith, MD, and Fred Kim, MD.

The group has described a previously unreported mechanism through which spironolactone dramatically improved vascular function in animals with heart failure. This improvement in vascular function in subjects with heart failure has been recognized as a common finding among drugs that are effective in prolonging life in congestive heart failure. The research, partly funded by the Mark and Emma Schiffman Endowment Fund, was recently awarded the Outstanding Resident Research Award at the Western Biomedical Research Forum in Carmel, CA.

The Schiffman Endow-

ment was established through a bequest to support promising heart research being conducted at the Sarver Heart Center.

The Mary Lou Hemler Arnold Award for Heart Disease, Stroke and Vascular Research

Cardiology fellow Brian Mitchell, MD, conducted a study to determine whether a so-called “immortality” gene is present in heart cells, a finding that could lead to advances in keeping hearts healthy later into life.

The gene he focused on was telomerase, a protein that adds “junk” DNA to the ends of chromosomes called telomeres. Telomeres are important because without telomeres, cells quit dividing. Telomerase is present in young cells that are dividing, as well as in cancer cells, which also are dividing. In cells that no longer divide, such as heart and nerve cells, there is no telomerase.

Recently, scientists have been able to create an “im-

mortal” cell line by forcing expression of telomerase in a cell type called fibroblasts. This means that instead of dying at their normal time, these cells have continued to thrive long past the time when they should have died. The research has tremendous implications in aging. Another group of scientists has been able to create a tumor out of normal cells in the laboratory by forcing those cells to express telomerase – a result that could hold answers to how normal cells become cancerous.

Dr. Mitchell’s team investigated telomerase’s role in heart cells, and in an effort to determine whether the absence of the gene was the reason heart muscle cells do not divide. The team first checked to see whether the cells had the protein telomerase, and if the ends of the chromosomes contained telomeres. Using rat heart cells, the team found that the answer to both questions is yes. There is some telomerase activity in rat heart cells, and the ends of

the chromosomal DNA have long telomeres.

Mary Lou Hemler Arnold contributed the funds for this award through her estate in order to advance treatments of cardiovascular disease.

The William J. “Billy” Gieszl Endowment for Heart Research

UA pediatric cardiologist Scott E. Klewer, MD,

beta 1 integrin), which are not located on the Down syndrome cell. This finding will have implications for all children with heart valve conditions.

Like most research projects investigating complex conditions, an answer often raises several new questions. “The recent completion of the human genome project is allowing our work to shift from ask-

focus on achieving improved diagnosis, treatment and prevention of congenital heart disease. Preference is given to studies focused on determining causes of congenital heart disease and means of prevention; in developing new treatments and improved care for patients with heart defects; and in innovative surgical techniques to correct, treat, or improve these conditions.

The Margarito Chavez Memorial Young Investigators Award

A study undertaken by Clifford Martin, a third-year medical student at the UA College of Medicine, examined a growth hormone factor to determine whether it could be used to stimulate growth in coronary arteries.

Synthesized genetic growth factors are being studied for their effectiveness in stimulating new growth in coronary arteries – as well as other arteries in the body – so that new vessels could be grown to bypass clogged arteries. Two of these growth hormones are called Vascular Endothelial Growth Factors 1 and 2 (VEGF-1 and VEGF-2). VEGF-1 has effects that are known to cause growth to occur in arteries, but the effects of VEGF-2 have been unclear.

Mr. Martin conducted a study in which he used

VEGF-1, VEGF-2 and a control substance to determine if there was a difference in the effect these growth factors have on the cell tissue in arteries. The receptors for these growth factors are the same on rat intestine as human endothelial tissue (found on the inner walls of arteries). The study compared the effects of the two compounds and the controls on the intestine of the rats, measuring changes on the surface of the intestine for indications that the substances that were introduced were having some effect. He was able to conclude that VEGF-2 does not have the same effect as its family member VEGF-1.

Margarito Chavez was a visiting scholar in the UA department of chemistry until his death in 1998. He was instrumental in several important scientific discoveries and was deeply committed to mentoring students interested in the sciences.

The Chavez award, created in his honor, provides funding for an undergraduate or medical student conducting promising research that contributes to the improved prevention, diagnosis and treatment of cardiovascular disease and stroke. ♥



Jim Gieszl, daughter Nancy Gieszl-Ference and Scott Klewer, MD

expanded his research into heart valve development using Down syndrome as a model for understanding molecular programming in the embryonic heart. Building on a recent finding that showed a unique difference in the adhesive capacity of the Down syndrome cells, Dr. Klewer’s research project determined that the process is mediated by the regulation of specific cell surface receptors (called

ing, ‘What does it look like?’ to ‘How does it work?’ ” Dr. Klewer says.

The William J. “Billy” Gieszl Endowment was established by the Gieszl family in memory of their son, Billy, who was born with congenital heart disease. He died in 1993 following a cardiac transplant in California.

The endowment supports both basic and clinical scientific investigations that

Remembering Bob Goff 1942 - 2001

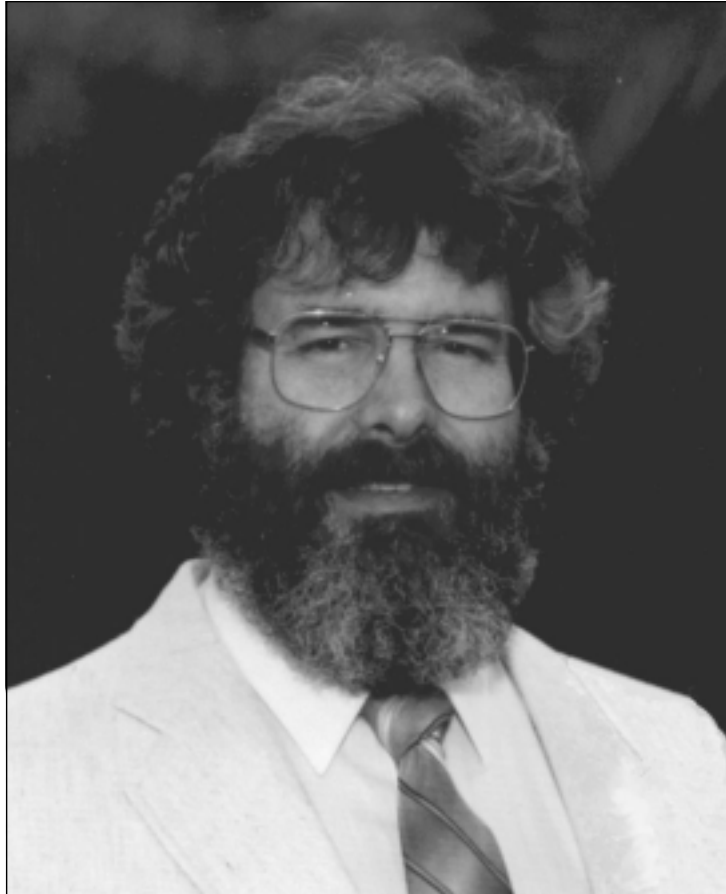
Bob Goff, the unofficial “ambassador” of University Medical Center’s cardiac rehabilitation program and a cheerful fixture at the Sarver Heart Center, has lost his fight against a serious heart condition.

Memorial services were held Jan. 11, with about 400 people filling UMC’s DuVal Auditorium to remember a man who left so many feeling better about life as he strolled the halls in a T-shirt, shorts and Birkenstocks.

Mr. Goff, who was listed for a heart transplant at the time of his death in December, was the husband of Valerie Vance Goff, a member of the Sarver Heart Center Advisory Board.

To those around the Arizona Health Sciences Center, Mr. Goff was an avid exerciser who rarely missed an exercise session and made a habit of introducing himself to newcomers at cardiac rehabilitation. With a quick wit and a great sense of humor, Mr. Goff could hold an intellectual conversation with anyone about anything. He liked to surprise staff members with small gifts or candy, once bringing a 20-pound smoked turkey to a holiday party.

But there was a side of Mr. Goff that few people around the hospital



knew. As a child, he was fascinated with telescopes and created his first telescope mirror before reaching high-school age. During his life, he made thousands of mirrors and lenses, from very small in size up to 88 inches in diameter, the largest of which is now in the University of Hawaii’s telescope on Mauna Kea.

He was a student of physics and astrophysics and was invited in college to join Mensa. He went to work for General Atomic Division of General Dynamics on top-level security, extremely high-precision optics projects, and later worked for Perkin

Elmer, eventually becoming certified as a master optician. Some of his work is on the moon, some is outside the solar system, and some is high overhead in reconnaissance, but most is here on earth in telescopes and high-end physics research projects.

Since 1994, Mr. Goff was the U.S. representative to the International Standards Organization’s committee on optical quality for telescopes for sale to the amateur market.

Among his other positions were Chief Observer at Cal Tech’s Big Bear Solar Observatory and Senior Telescope Technician at Kitt Peak. When he moved to Kitt Peak in 1983,

he was one of only five people who lived full-time on the mountain, and was ecstatic to be living among 20 of the world’s finest telescopes.

Mr. Goff always wanted to go to the Great Nebula in Orion, a massive birthplace of stars. We should think of him up there now, with no more fatigue, no more naps, no more pills to take. Mrs. Goff says one of the things that made her fall in love with Bob was his “Oh, wow! Gee whiz!” attitude toward life. We might hear him now, as he explores black holes, quasars and quarks, saying, “Oh, wow! Gee whiz!” ♥

IN THE NEWS

Yuma Conference Draws 100

About 100 people learned the newest developments in the prevention and treatment of heart disease at a Sarver Heart Center public education conference in Yuma on Dec. 1.

Three Heart Center doctors – Gordon A. Ewy, MD, Jack G. Copeland, MD, and Peter Ott, MD – and exercise physiologist Lawney Snyder, MS, MBA, covered topics including heart disease prevention, cardiac devices, arrhythmias, stress management and exercise.

The conference, sponsored by University Medical Center and Yuma Regional Medical Center, was held at YRMC's Corporate Center.

The Sarver Heart Center also held public education programs in Litchfield Park, SaddleBrooke, Prescott and Tucson during 2001.

April Event Includes Kern, Alpert

Two Sarver Heart Center doctors will be among experts taking part in a special weeklong Healthy Heart program offered at Canyon Ranch Health Resort.

Karl B. Kern, MD, and Joseph S. Alpert, MD, will give presentations throughout the week of April 7-14 on topics including overall heart health, how to stop heart disease and alternative therapies.

The program is intended for people who have experienced heart disease, are at high risk for heart disease or who have a loved one with heart problems.

For more information, call 800-742-9000 or (520) 749-9000.



Clockwise from top left. Exercise physiologist Lawney Snyder, MS, MBA, demonstrates a stretching exercise with Judy Cuming. Bill Gresser takes a lap around the room to increase his heart rate as Joe Lau, in front, listens to a speaker. The organizing committee included (top row) Don Cutlip, Norma Ingold, Gary Munk and (bottom row) Liney Jessen and Louise Barkley Braden. Among the conference's participants were state Rep. Jim Carruthers and state Rep. Robert Cannell, MD.

FROM THE DIRECTOR



This issue of the Sarver Heart Center Newsletter announces the creation, by an anonymous challenge gift, of **The Gordon A. Ewy, MD, Endowed Chair of Cardiovascular Medicine.**

I am most appreciative not only to the anonymous founder but also to the many people who responded to this challenge by contributing to this endowed chair.

Individuals who establish endowed chairs usually name them in honor of themselves or a family member and so it is somewhat unusual for a professor to occupy a chair in his or her own name. The unselfish act of the patient who deflected the recognition from herself and her husband to honor me in this unique way is indeed touching.

Endowments are critically important to the quality of a medical college. I believe that the future quality of the University of Arizona College of Medicine will be determined not only by its leadership, but also by the level of its endowment. Top schools have billions of dollars in endowments, allowing them to attract and retain a cadre of world-class research scientists

and professors.

This endowment will not only be of great benefit to the Sarver Heart Center, but also immediately upon my retirement and forever thereafter will be available to help support my successor.

My gratitude and the gratitude of the University extend to all who made this possible.

Sincerely,

Gordon A. Ewy, MD
Director, UA Sarver Heart Center

The *UA Sarver Heart Center Newsletter* is published regularly. News reporters are welcome to quote from newsletter articles and are kindly asked to provide credit. Correspondence or inquiries should be addressed to: UA Sarver Heart Center, Public Affairs, PO Box 245046, Tucson, AZ, 85724-5046.

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