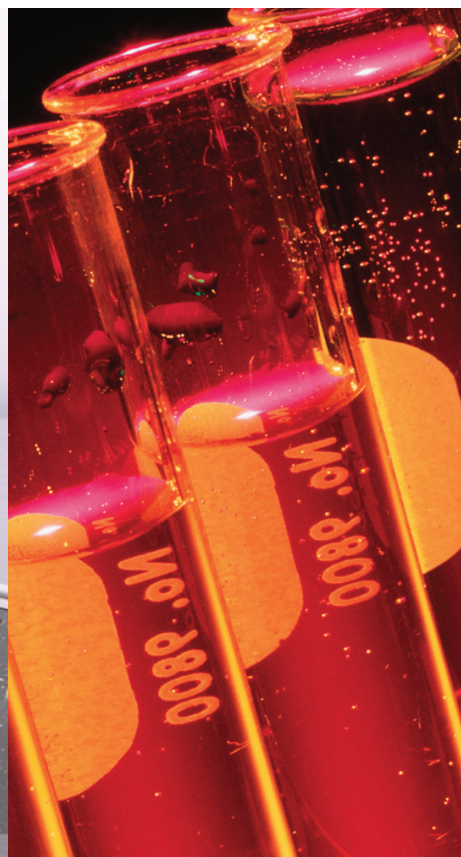


FALL
2011

ACHIEVEMENTS

National Newsletter of ARCS® Foundation



Achievement Rewards for College Scientists

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President's Message

Investing in our Future



*Jeanne B. Berdik
National President*

Dear ARCS® Foundation Members:

I've had about 12 weeks to pull myself together so that I can attempt to respond at least somewhat adequately to the tremendous honor of becoming the ARCS Foundation National President. I've also had a chance to think about what it means. While I am clearly personally thrilled and excited, I also am keenly aware of the responsibility that comes with this job. And I don't mean the responsibility to get this task done or write that report or prepare for another meeting. I mean the responsibility of connecting and building relationships across the entire national organization, of supporting each Chapter and its members as best I can and of facilitating in some small way your ability to accomplish our mission.

Having the opportunity via this letter to share with you why I am passionate about this organization is one way I can do that. I have always been about taking the long view – investing for the long-term benefit. I realize as we all do in this harsh economic climate, that there are countless short-term, immediate and very important needs that must be met – many of them about actual survival. As a society we must address the plight of the hungry, the homeless, the sick. We must save our arts organizations and we must provide our children with the education they need to excel. However, while we are doing these things we must also do more. While we feed the hungry, we must also support those who might develop new agricultural products and methods that would feed whole countries. While we shelter the homeless, we must also support those who are working on alternative energy strategies that would reduce our dependence on foreign oil and make shelter for all more affordable. While we support health care for the sick, we must also invest in those who will develop the processes and methodologies to prevent that sickness. And while we donate to shore up struggling operations, we must

also invest in the innovators whose research will create companies which, in turn will be a source of employment and philanthropy for years to come.

There were billboards around my home town of Pittsburgh a year or so ago that were sponsored by the John Heinz History Center advertising a program entitled “How Pittsburgh Changed the World.” We in Pittsburgh all know – because we have great hindsight – that this was not an idle boast. Pittsburgh did change the world. Wouldn’t it be wonderful 50 years from now if there could be billboards proclaiming “How ARCS Foundation Changed the World?”

ARCS Foundation is about investing in our future. It’s about supporting the innovation upon which the economic recovery of our nation and the quality of life of people around the globe depends. I recently received a few words of praise for the organization from a colleague and Executive Director of a local foundation, who, in a takeoff from a well known quote by Margaret Meade*, said – “This just shows what a group of women can do when they decide to move!” I think she was right on the mark. Please let me know how I and the National Board can help you achieve your world-changing goals.

Jeanne B. Berdik
National President

New Website and Database Launched at arcsfoundation.org

What started in March of 2009 at the National Board meeting in Dallas, TX as “what is the realm of possibilities for our IT future?” has now become a reality. Janie Wilson was National President then and when she passed the President’s gavel to me it came with the charge to provide positive support for the concept and to see the project through to a successful outcome. We are now there!

Since July 2010 a laser-like focus has been on the very clear and urgent need for ARCS Foundation to have a much more highly-functional, user-friendly and dynamic web presence to advocate the ARCS Foundation mission to our members, key stakeholders – universities, scholars and donors – and the general public. The initial concept for a new website almost immediately grew to include a multi-faceted database. It’s this database which will change the way National and all of our Chapters conduct their critical administrative work and record-keeping – adding/ updating all contact information, planning events, sending National Board and Chapter meeting notices and mass mailings, maintaining



Jenny Edstrom, Lynda Birkelbach, and Mary Snitch

**“Never underestimate the power of a small but committed group of people to change the world. Indeed, it is the only thing that ever has.”*

– Margaret Meade

university and scholar profiles, and on and on. Most importantly National and Chapter Administrators will now have the ability to manage their data, as well as make updates to member-only and public pages' news and information.

As the National Board discussed website and database requirements to best benefit National and our 17 Chapters, we heard from seven developers who were very interested in being selected as our vendor.

Ultimately, West Monroe Partners in Chicago was selected and the National Board unanimously approved going forward with the project at their February 2011 meeting in Phoenix. Contracts were signed and website development began on March 1st – with the very fitting name “Project Mercury”.

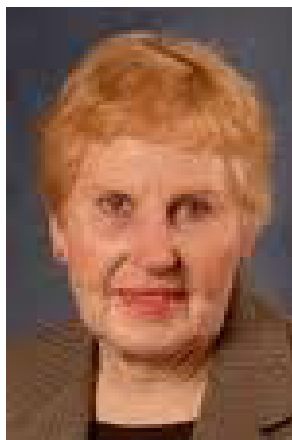
I could say that “the rest is history”. However, that wouldn't begin to describe the thousands of collective hours of work, enormous dedication and insistence on having a superior website for all ARCS Foundation members, our stakeholders and ARCS Foundation friends we have yet to meet.

Project Mercury is the largest initiative ever undertaken by ARCS Foundation. Without question, this project would not be a reality without the passion and expertise of Lynda Birkelbach (Chicago Chapter) and Jenny Edstrom (Minnesota Chapter), who served as Project Managers during the proposal phase and then through development. Also, right there with Linda and Jen were Nancy Spetzler (Phoenix Chapter) and Ronnie Martin (Atlanta Chapter) who read and edited every public and secure page from National and Chapter “authors” to ensure brand compliance. And then we had our outstanding vendor partners West Monroe and Promet who walked hand-in-hand with us every step of the way. Promet will now continue to provide hosting and Webmaster services.

Congratulations and a million thank yous to the entire Project Mercury Team – Steering Committee, Chapter Presidents, Chapter Migration Coordinators, all National and Chapter Administrators, and to Janie for lighting the fire.

You did it and we have arrived at www.arcsfoundation.org!

*Mary L. Snich
Past National President
Project Mercury Exec. Sponsor*



Patricia Beckman

A Special Thanks ... Lifetime Achievers: Patricia Beckman, A Force for ARCS Foundation

Gloria Patricia Beckman, (1933-2100), founding president of the Orange County Chapter of ARCS Foundation and also a member of the Chicago, Colorado and Pittsburgh Chapters, died of cerebral vascular disease this summer in her Corona del Mar home. Her death leaves an ache in the hearts of her friends and family. She is remembered for her passion for supporting young scholars pursuing an education in the sciences. ARCS Foundation was a perfect fit for her.

The association of ARCS Foundation with the Beckman name started in 1981 when the Seattle Chapter named Dr. Arnold O. Beckman its Scientist of the Year. In the late nineties, the Los Angeles and San Diego Chapters invited Dr. Beckman to attend Scholar Awards events. Pat was his chauffeur. She began to think about the requirements for a Chapter in Orange County and spoke to the Chancellor of the University of California, Irvine (UCI), Ralph Cicerone. The former chancellor, Laurel Wilkening, had been provost at the University of Washington and knew of the contributions of the Seattle Chapter. Both Drs. Cicerone and Wilkening encouraged Pat. UCI helped organize a meeting

of community leaders in Pat's cliffside home overlooking the Pacific Ocean. ARCS Foundation National President Ginny Thomas flew from Seattle for the reception. Representatives from the Los Angeles, Northern California and San Diego Chapters attended. UCI Professor A.J. Shaka, former ARCS Scholar, told of his college days when he was torn between becoming a tennis pro or a science professor. When John McEnroe "who was very, very good" beat him, Shaka opted for science. The audience was enthralled and many signed up to start a Chapter. Pat led the way. National invited her to Honolulu for the National Annual Meeting (NAM). With help from new recruits, Pat enlisted enough members to meet the National requirement. At the 1999 NAM in Washington D.C., Ginny Thomas presented the Orange County (OC) Chapter its charter. Pat was president for two years and then was a board member each year. She was ARCS Light in 2002. That year the Chapter named, in perpetuity, the Patricia Beckman Scholar Award given annually. Pat was a member of the ARCS Foundation National Board and Council of Advisors.

After her mother's death in 1989, Pat returned home to take care of her father. Through Pat's intercession, Dr. Beckman attended several ARCS Foundation events. After his death in 2004, Pat initiated the OC Chapter ARCS Foundation Arnold O. Beckman Memorial Science Lecture and

Dinner in 2005. She invited the DNA co-discoverer Dr. James Watson as the first speaker and the event sold out. Pat chaired the event for the next five years.

New members and officers of the OC Chapter would receive calls from Pat to chat and to ensure that they understood the mission of ARCS Foundation and their responsibilities. She was always willing to help. One of her last acts for the Chapter was to hand the treasurer a donation for a scholar award for 2011-2012. On June 30th, Pat drove her 1996 Lincoln to meet Kathy Kerrigan, rolled down the window and gave her the check. It was the last time she was seen by an ARCS Foundation member.

Pat was an avid supporter of ARCS Foundation because she believed in its mission. She aided many Chapters by attending fundraising and Scholar Awards events. She bought auction items and contributed to Chapter endowment funds. Pat filled in for the OC Chapter president at some of the National Board Presidents' meetings and was close to many Chapter presidents.

She was a major donor to the National Endowment Fund (NEF). In 2005/2006 she volunteered to personally match each Chapter's donation to the NEF up to \$10,000 per Chapter. Her matching donation was \$140,000. Her donations to the NEF are the largest to date and total \$168,450.

In addition she directed to NEF \$25,000 in donations from the Mabel and Arnold O. Beckman Foundation and \$25,000 in matching funds from the Orange County Community Foundation. The NEF increased by \$218,450 thanks to Pat plus the \$140,000 of Chapters' donations that met her 2005/2006 challenge.

Pat served on the boards of the Mabel and Arnold O. Beckman Foundation and the UCI Foundation. She was a lifetime trustee of the California Institute of Technology (Caltech) and was a board member of the Caltech Chemical and Chemical Engineering Division. She was a member of the UCI Nursing Program Leadership Council and had earlier served on the UCLA School of Nursing Advisory Board. Pat received Western University's 2009 Humanitarian of the Year Award. She was named the 2010 Woman of the Year by the Muses, a women's support group for the Los Angeles Museum of Science. Each year at the California State Science Fair for high school students, Pat funded two Patricia Beckman Project of the Year Awards given in honor of Dr. and Mrs. Beckman.

Pat earned a Bachelor of Science degree in occupational therapy at Mills College in Oakland, California, and worked as an O.T. for several years. She then earned a B.S. in nursing at California State University, L.A., as well as a Certificate in Public Health.

She subsequently worked as an R.N. Pat was born in New York City, lived briefly in Chicago and came to California at age three. She lived in Altadena near the Caltech campus where her father was Professor of Chemistry. The Beckman family moved to Corona del Mar in 1960. Pat later lived in Denver and loved to hike and camp in the Colorado mountains.

Pat enjoyed books, travel, and her late black Labrador retriever. She loved to get into her Volkswagen Beetle with her dog and drive all around the U.S. Last February, Pat went on a three week "private jet" trip. With other passengers, she visited London, Turkey, Rwanda (to see mountain gorilla), Tanzania's Ngorongoro Crater, Sabi Sand Safari Camp in Kruger Park, South Africa, the Maldives, Indonesia, Tibet, India and Petra, Jordan. She loved every minute of the trip.

This past spring, Pat spent hours pulling weeds and working with her gardener to restore the roses "like dad had" and to make her garden beautiful. She liked physical exercise and reading. She would often recommend her favorite current books. Most of all, Pat liked to encourage young people in the pursuit of education in the sciences. One of her favorite quotes was "If you want happiness for a lifetime, help someone else." She will be missed.

*Mary Lou Furnas
Orange County Chapter*

Pat Beckman -- Notes from the Chapters

The following notes were written by a number of Chapter representatives upon hearing of Pat Beckman's death. I share them with you as testimony to the generosity and friendship of this quiet but remarkable woman.

*Jeanne B. Berdik
ARCS Foundation
National President*

From Chicago –

Pat and I met when we were presidents and became friends after that. Pat joined the Chicago Chapter in 1999. She maintained many friendships in the Chicago area, so when she attended our Awards Luncheon and Annual Benefit, she always brought a group of longtime friends from the Chicago area. Pat was also a generous supporter of our auctions and seemed to particularly enjoy "winning" tickets to the Oprah Winfrey show. She donated the initial \$10,000 funding for the Chicago Chapter Endowment Fund in 2004. She sponsored an Arnold O. Beckman Award for the past several years, beginning in 2005-06 through this current academic year. Pat was honored for her generosity to ARCS Foundation, and our Chapter specifically, as the Chicago Chapter's Person of the Year in 2005.

*Barbara Benezra
Past President*

From Colorado –

Pat was a cherished friend and member of the Colorado Chapter for the past several years. Most recently she was an Associate and "Angel" member. When possible, Pat visited us in Colorado and participated in our Scholar Luncheons and Galas. She began funding an annual scholar award in honor of her father, Arnold Beckman, in 2006. In total she funded five awards. The Colorado Chapter plans to grant a 2011-2012 scholar award in her memory. Pat had an early history in Colorado and was a special friend to many in our Chapter. Thank you for preparing her tribute.

*Shirleen Tucker
President*

From Los Angeles –

I knew Pat when we were both on the National Board many years ago. She was so much fun to be with and to talk to. She was very supportive of the L.A. Chapter and came to all of our Scholar Recognition Luncheons. That wonderful honey-colored hair was always visible in the crowd of supporters.

*Gay Goerz
Co-President*

From Lubbock –

Pat Beckman was grace personified. No matter your station or Chapter size, she made each person feel so important. Pat thoughtfully carried on her family's quest for the best in medical research. The Beckman

Foundation's support of scholar awards for doctoral students studying in the area of chemistry has been very important to our Chapter's desire to offer as many scholar awards as possible each year. The "Beckman Chemistry Scholarship" is considered quite an honor for the student selected to receive this named award. The ARCS Foundation Lubbock Chapter will truly miss Pat Beckman's friendship as well as her generous stewardship. I am truly honored to offer our thoughts honoring Pat Beckman.

*Gail House
Past President*

From Northern California –

Pat has been contributing to the Northern California Chapter since 2001, coming to our fundraisers and Scholar Awards Luncheons over the years. I have already heard from several of our past Presidents about her personal involvement and support of our Chapter and, right up to this year's National Annual Meeting, she was actively involved in supporting what she felt was important to all Chapters. She is sincerely missed. She was the epitome of living and breathing the ARCS Foundation mission. She was most generous and involved with many Chapters but her actions, quiet and consistent, made her the powerhouse that we all revered and were inspired by. We are truly saddened by her loss.

*Cynthia Haueter
President*

From Pittsburgh –

Pat was a cherished friend to many in our Pittsburgh Chapter. She had a special spot in her heart for Pittsburgh because of her parents. Through their foundation, The Arnold and Mabel Beckman Foundation, they established the Beckman Scholars program at the University of Pittsburgh. Pat furthered their legacy by establishing the Arnold O. Beckman ARCS Scholar Award. Her enthusiasm for supporting students interested in pursuing careers in scientific research was contagious. Pat was a quiet force and a role model. She will be missed by many in Pittsburgh.

*Beth Wainwright and Sue Harter
Past Presidents*

From Portland –

Although Pat was not a member of our Chapter, she made donations on three separate occasions. She also attended one of our first Scholar Awards Luncheons and came last year when we celebrated our \$1M milestone with Mr. Bill Gates, Sr. It was amazing that she came to our event, as her Chapter was having an event the next day - so she flew up and back the same day. She was an amazing lady and I am happy to hear you are organizing a tribute to her.

*Caron Ogg
President*

From San Diego –

Pat Beckman was a good friend to Pattie Wellborn, one of our four

Founding Members, and through that relationship, she became a cherished inspiration for many in our Chapter. While she never became a member of the San Diego Chapter, she donated to our Scholars more than once, and was one of the major contributors to the Wally Schirra Memorial Endowment on its founding in 2007.

*Robin Luby
President*

From Seattle –

At the time Pat became the Orange County Chapter's first President, she was fairly inexperienced in the business and nonprofit arena and somewhat overshadowed by her famous father. She said she wanted to make an impact in her own way. She was honest about her short comings as a public speaker. She went on to take the Dale Carnegie course and became a good speaker and leader in ARCS Foundation. She was a lovely human being and became a great philanthropist following in her father's legacy. I will miss her.

*Vicki Griffin
Past President*

From Tampa Bay –

We had no formal connection to Pat since we are so new, but I had the privilege to sit by Pat for many meetings and lunches in this past year.... And I think the world of her. I can only imagine what you all feel after knowing her for so many years. What an honor...

*Linda Seefeldt
President*

May I Have the Envelope, Please?

It's not time for the Oscars but some recognition is in order.

And the Awards go to...

Patience of Job Award to Lynda Birklebach and Jenny Edstrom

Responding calmly to all concerns and questions, Lynda and Jenny held our hands when we voted "Yes!"

Always On Call Award to Lynda and Jenny

Always willing to answer calls and provide information about the new website and its intricacies, Lynda and Jenny have been "on call" for months.

Sponsorship and Support Award to Mary Snitch

Our Long Range Plan called for a new website which would better represent ARCS Foundation as an organization that supports science and technology. Mary's support has helped to make the plan a reality.

Styling and Styling Award to Nancy Spetzler

Always stylish, Nancy expanded her expertise to ensure "brand" compliance in the presentation of our new site – all the little details which make a website look professional.



Toni Nickell

Tired Eyes Award to Mary Snitch, Nancy Spetzler and Ronnie Martin

Reading and reviewing all content for branding compliance... Ensuring all copy is current and updated... Spending hours and hours proofing and editing... They made sure we dotted our "i's" and crossed our "t's"!

Guinea Pig Award to ARCS Foundation Portland Chapter

As the pilot Chapter, Portland led the way with emails and documents flying through cyberspace. Because of their willingness to be first, Portland deserves our gratitude and thanks!

Thank you to the whole team from all of us!

*Beth Wainwright
Pittsburgh Chapter
National Vice President -
New Chapter Development*

Thanks, Ms. Nickell...

Before there was email, before there were mobile phones, before the internet was a household tool – there was Toni. In 1997, Toni Nickell, National Board Member from San Diego, bravely joined Ginny Lukasik, National Board Member then of Los Angeles, on a voyage into cyber space. Together they went where no ARCS Foundation National Board members had gone before, launching our first public presence on the website in 2000 and our much utilized Member and Scholar websites in 2002. In an organization where staff is pretty non-existent and continuity of personnel is at a premium, ARCS Foundation members suddenly had a resource that provided a one-stop filing system for archiving and retrieving data, for sharing information among members and Chapters, for providing timely announcements and for maintaining our history. Toni then went on to maintain, sustain, populate and improve this amazing new tool for the next decade – almost all of that time as a Director of the National Board and volunteer Webmaster. She provided not only technical expertise but was the chief advocate for use of the website and for its value in projecting an ARCS Foundation "brand," -- cajoling, prodding, sometimes "scolding" all of us to create a consistent public image and present only current information. She did this with a

wit and dry sense of humor that are legendary – no one wanted to follow her reports at National Board meetings!

Toni has been a member of the San Diego Chapter since 1987 where her leadership and fund raising skills have made a significant impact. She held many Board positions for the Chapter including Treasurer and President (1998-2000). It is not surprising that she also served as the Chapter's in-house resource in information technology. Other volunteer commitments have included the Neurosciences Research Foundation, Inc., Scripps Health's President's Council, the Charity Fair Horse Show and the Helen Woodward Animal Center. In 2008, Toni received the Outstanding Organizational Volunteer of the Year - National Philanthropy Day, from the Association of Fundraising Professionals (AFP), SD Chapter. In 2009, she was named as a Woman of Dedication in San Diego by the Salvation Army for her commitment to philanthropy in the community. She is also a champion horsewoman.

As we begin a new technology era for ARCS Foundation with a new website and database structure, we say thank you to Toni and her pioneering, persistent, spirit which occasionally forced us to "geez, Louise, get with it." She was our first technology teacher in technology and we are grateful.

*Jeanne B. Berdik
National President*

2011 National Annual Meeting Informs and Entertains

The 53rd ARCS Foundation National Annual Meeting (NAM) entitled Atlantic Adventure, "Science by the Sea," was held June 1-4 on the gorgeous Florida Atlantic Coast at Amelia Island. ARCS Foundation members and their guests traveled from across the country (including Hawaii!) to participate with long-time colleagues and friends in this informative and entertaining event.

The NAM program was designed to provide important training critical to all members. It was kicked-off Thursday morning when Professor Chris Palmer, film maker and author, energized his audience during dynamic workshops on Networking and Fundraising. Professor Palmer was followed by Dr. Karen Holbrook, Senior Vice President for Research, Innovation & Global Affairs at the University of South Florida who spoke at Thursday's luncheon which honored the ARCS Lights from 16 of the 17 ARCS Foundation Chapters. Thursday afternoon was filled with the National Board Overview and Orientation and the Chapter Presidents' Orientation. In addition, the Project Mercury Team was on hand for discussions of progress on the new website.



Chris Palmer conducts NAM workshop.

The Friday morning attendees were treated to a Distinguished Science Panel on Marine Science comprised of speakers from the University of South Florida (provided to us by the newest ARCS Foundation Chapter in Tampa Bay): Mya Breitbart, Ph.D., Pamela Hallock Muller, Ph.D., Holly Rolls and Julie Galkiewicz. This was followed by the keynote address given by Professor Palmer entitled "Science and Communications:

Friends or Enemies?" complete with exciting clips from a number of his wildlife films.

A welcome opportunity to escape the meeting rooms and enjoy the Florida sunshine presented itself Friday afternoon in the form of a boat tour of Cumberland Island. The tour was narrated by a local history and nature expert who told stories of Amelia and the Cumberland Sound; Fort Clinch, a Civil War era fort; and the demise of the shrimping industry. Participants were especially thrilled to see wild horses on the beaches of Cumberland Island. For some of the hardworking ARCS Foundation members, this was the only time they left the hotel during the entire NAM!

To provide a wonderful conclusion to a stimulating day, Sylvia Earle, Ph.D., oceanographer, explorer, author, lecturer, Explorer in Residence of the National Geographic Society, and former chief Scientist of the National Oceanic and Atmospheric Administration, enthralled everyone with her after dinner presentation.

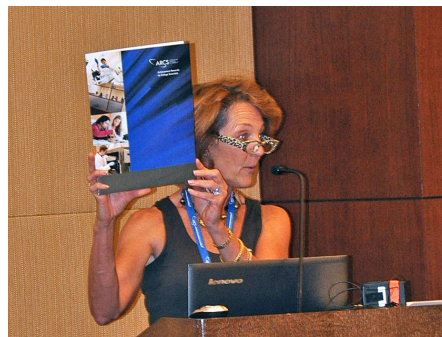
NAM 2011 concluded Saturday morning with the National Board meeting followed by reports to the NAM attendees by the National Vice-Presidents and other chairs. Janie Wilson then presented a tribute to outgoing President, Mary Snitch, entitled, "There's Something About Mary" which included a list of words that

would apply to Mary, including intelligent, indefatigable, leader, listener, counselor, fundraiser, visionary, humorous, graceful, courageous, honest, and above all, a friend. Installation of the 2011-2012 National Board followed. Finally, newly installed National President Jeanne Berdik thanked the outgoing Board for their hard work, and the accomplishments of their term. Jeanne concluded by asking for the help of all present to accomplish the work of the National Board, and encouraged everyone to step forward at any time with ideas, questions, and concerns.

*Ronnie Martin
Atlanta Chapter*



Jeanne Berdik



Nancy Spetzler



*Jeanne Berdik, Reva Kahmi, and
Lynda Birkelbach*



2011 ARCS Lights

Great Achievements Campaign: Building ARCS Foundation National Endowment

As previewed in our Spring Issue of "Achievements", the Great Achievements campaign was brought to the National Board and approved at the National Annual Meeting on Amelia Island in June. This exciting campaign is intended to increase our National Endowment by \$1 million dollars by July 1st, 2014. Reaching this important, forward-reaching goal is critical as the National Board plans to develop new Chapters, provide for special projects and continue support of our existing Chapters. We are off to a very strong start with the receipt this summer of a generous corporate gift of \$50,000. The implementation of the campaign will be managed by the National Fund Development Committee, chaired by Judith Miller (Utah Chapter). Watch for additional details on the Great Achievements campaign on the new ARCS Foundation website.

*Mary L. Snitch
Past National President*



Mya Breitbart, Julie Galkiewicz, Holly Rolls, and Pamela Hallock Muller



Chris Palmer and Mary Snitch



Sylvia Earle



Ann Boyd, Angie Delaney, and Sue Alexopoulos



Carlyn Steiner, Sandra Matteucci, and Anna Maria Matteucci



Boat Tour of Cumberland Island/Wild Horses on Cumberland Island



ARCS Foundation Science and Engineering Advisory Council at Full Strength

ARCS Foundation Science and Engineering Advisory Council (SEAC) was established in 2009 to bring together a small group of senior scientists and engineers from across the country who could draw on their collective experience in government, industry, and academia to provide advice to ARCS Foundation.

Five new members joined SEAC in early 2011—Howard Bruschi, retired Senior VP and Chief Technology Officer at Westinghouse Electric Co., Susan Bryant, research professor and former Vice Chancellor for Research at UC Irvine, Ray O. Johnson, Senior VP and Chief Technology Officer at Lockheed Martin Corp., John Reed, CEO of the Sanford-Burnham Medical Research Institute in San Diego, and Susan Smith, Professor and Senior Scientist at the Oregon National Primate Research Center, Oregon Health & Science University. The council now is at full strength with 14 members.

SEAC's principal focus is on technical and institutional issues that are relevant in helping ARCS Foundation meet its strategic goals.

During its first year of operation (2010) SEAC considered four

major strategic areas for ARCS Foundation:

- focusing efforts so as to fill a unique national niche and thereby maximize impact on U.S. science and engineering,
- expanding visibility and national presence via outreach to government, universities, and communities,
- apportioning support to students in both disciplinary and interdisciplinary programs, and
- selecting candidates for new Chapter locations and anchor universities.

So far in 2011, SEAC has continued its discussions with representatives of the ARCS Foundation National Board regarding ways to assist in new Chapter development and in implementing the recommendations of the ARCS Foundation External Relations Task Force. In May, SEAC also responded to a request to provide

policy advice on awards to undergraduate students. During the remainder of 2011, SEAC plans to examine and comment on two topics:

- recommendations and priorities stemming from the 2011 ARCS Foundation External Relations Task Force report and
- interpretations and implications of the 2010 survey of ARCS Foundation's university partners.

SEAC will continue its work via conference-call meetings in late 2011 and then hold a full meeting concurrent with the National Board meeting in February 2012 in Phoenix. A more complete summary of SEAC's work in 2010-2011 can be found in the annual reports of ARCS Foundation committees. Biographies of SEAC members can be found on the ARCS Foundation web site.

Joseph Alexander
SEAC Chair



Beth Wainwright, Janie Wilson, Di Alexander, Mary Snitch, and Nancy Spetzler at NAM 2011

Attending the Juno Launch

On Friday, August 5th, NASA's solar-powered Juno spacecraft lifted off from Cape Canaveral Air Force Station at 12:25 p.m. to begin a five-year journey to Jupiter. More than twenty representatives from ARCS Foundation Atlanta Chapter were there to witness the launch of Juno which traveled into space aboard an Atlas V-551 rocket.

The \$1.1 billion Juno mission will arrive at Jupiter in 2016. It will cover the distance from Earth to the moon in less than one day's time. It will take another five years and 1,740 million miles to complete the journey to Jupiter.

The spacecraft will orbit the planet's poles 33 times and use its collection of eight scientific instruments to probe beneath the gas giant's obscuring cloud cover to learn more about its origins, structure, and atmosphere, and look for a potential solid planetary core. Juno's 11-day elliptical orbits will drop under Jupiter's radiation belts to within 3,000 miles of the 88,000-mile-diameter planet, closer than any previous spacecraft.

Following launch, the 8,000 pound spacecraft unfurled three 29 foot long solar panels to provide the power needed to get to Jupiter, which is five times farther from the sun than Earth.

Why the name Juno? Juno's name comes from Greek and Roman

mythology. The god Jupiter drew a veil of clouds around himself to hide his mischief, and his wife, the goddess Juno, was able to peer through the clouds and reveal Jupiter's true nature.

ARCS Foundation members received an e-mail invitation to attend the launch from NASA. The invitation included a reception at the Radisson Convention Center, a mission briefing and access to the Kennedy Space Center Visitor's Complex. Key members of the launch team spoke at both the reception and the mission briefing. The excitement of the launch team was contagious! We realized that a number of our fellow viewers were family members of individuals who had worked on this mission for many years. Each session ended with the cheer: "Go Atlas, Go Centaur, Go Juno!" (Centaur is second stage of the rocket booster.) Following the mission briefing, the group had full access to the Visitor's Complex.

LAUNCH DAY

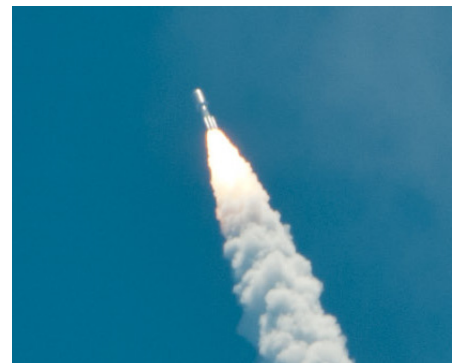
We arrive at the Visitor's Complex for check-in and board buses to the Banana River Launch Observatory Site, which features rows of stadium seating to view the launch, as well as the Apollo/Saturn Exhibition Center. Launch target time is 11:34 a.m. Most visitors spend time in the Exhibition Center, which contains wonderful exhibits of the Apollo/Saturn missions. It also has food service and air conditioning; both

become increasingly valuable as the early August temperature in Florida approaches 95+ degrees!

NASA Administrator and former astronaut Charles Bolden addresses the viewers, welcoming them to the launch and the Kennedy Space Center. This is followed by the singing of the National Anthem.



Four minutes to launch there is a delay; a problem develops with the Centaur unit. The countdown is halted and from our seats, we can listen to the requests (in five minute increments) for extension of the launch time. There are at least six or seven requests for extensions and we become increasingly concerned that the launch might not take place. Finally, the issue is resolved. There is a roll call of launch partners, who all enthusiastically respond "Go!" A few minutes later, Juno soars into space, atop the Atlas V-551 rocket.



ARCS Foundation Atlanta members and guests attending the launch included Janie and Chuck Wilson, Sherry and John Lundeen, Cathy and Peter Millichap, Pat and Nolan Leake, Ronnie Martin and Rich DeMillo, Susie and Bill Deyo, Lara, Peg and Keith Cooley, Katherine, Sam, Austin, Liz and Peter Lauer and Kathy and Dennis Berry.

“Peter and I were so impressed with the technological accomplishments of NASA” said Cathey Millichap.

“The excitement was palpable before the launch, especially for the families who worked on Juno for the last seven years,” said Susie Deyo. “It’s an event I will always remember.”

“Totally awesome,” according to Peg Cooley, “despite the terrible heat!”

“We were all sweating (literally-it was 100 degrees) bullets whether the launch would happen or not ... the agony of the delays ... the euphoria of the launch clock finally being started again for the final four minutes. But given the complexity of the launch systems, the vehicle, the computers, the chips, the wires, it seems miraculous that a launch happens at all. What a credit to the human mind and spirit!” declared Janie Wilson.

Pat Leake recalled that while waiting for the holds to be lifted, we were entertained by an obliging alligator which swam by



the viewing stands, as if on cue. “When the rocket took off, it took several seconds for the sound to reach us, but when it did, our clothes vibrated with the low-frequency sound waves.”

Kathy Berry
Atlanta Chapter*

**Back in Atlanta, Dennis and I watched several updates on the Juno launch and discovered this was the first “public invitation” launch sponsored by NASA. In light of the end of the shuttle program, NASA wants to encourage interest in their other programs and this launch invitation was a test of that strategy. While we don’t have exact numbers, the event was heavily attended and NASA officials deemed it a success.*

Atlanta most definitely had the largest Chapter delegation at the

launch. Other ARCS Foundation Chapters attending included Northern California, Metro Washington, Minnesota, Chicago, Pittsburgh and Portland, bringing the total ARCS Foundation attendance to over forty.

Our congratulations goes to NASA for a successful science mission launch, and our huge ARCS Foundation thanks go to NASA for giving ARCS Foundation members this amazing opportunity – with VIP treatment from beginning to end. A number of the ARCS Foundation attendees heard Lockheed Martin VP, Jim Crocker, provide an exciting briefing on the Juno launch, and we will all hear more from Jim when he speaks at our National Annual Meeting next June in Denver.

*Mary L. Snitch
Past National President*

Seattle Chapter Fundraising Reaches New Heights

As the Seattle Chapter celebrates its 33rd year, we continue to be grateful for our steadfast supporters. The Seattle Chapter of ARCS Foundation is committed to the long-term future of its funding, and endowments are an important element. A fully-funded Named Endowment promises that a new graduate student is funded for three years on a continuous basis in perpetuity. Since 1999, with matching funds from the 2 institutions we serve, 24 ARCS Foundation Named Endowments have been established at the University of Washington and Washington State University. One of our generous philanthropists is Mary Kay McCaw.

“Various friends of mine have children afflicted with diseases such as cystic fibrosis, Huntington’s and juvenile diabetes,” says Mary Kay McCaw, “or parents suffering with dementia or Alzheimer’s. This sparked my interest in genetic research.” Compassion for these friends prompted Mary Kay to generously fund an ARCS Foundation Endowment at the University of Washington this past year.

ARCS Foundation Endowments help ensure that bright minds will continue to focus on diseases that are currently considered incurable, and on other scientific issues facing our world. “We have some extremely talented students who struggle to keep going,” says Mary Kay, “but with just a little help, many of them can continue to passionately pursue

their research.” What does she hope will be the potential outcome of her endowment? The answer is simple. “To help retain talented students in their fields of study, working toward cures.”

With the support of friends like Mary Kay and the tenacious work of our development team, Seattle has experienced record fundraising success this year. In addition to the 24 endowments we have established at our recipient universities, this year’s auction raised over \$340,000, including 7 new named fellowships. On October 10, 2011, we will experience a first for the Seattle Chapter—a fully sponsored ARCS Foundation Luncheon. These gifts have energized our resolve to support our universities’ efforts to recruit the best and brightest students to our state’s premier graduate programs.



Chicago Chapter Hosts Member Reception

On Wednesday, September 14, thirty ARCS Foundation Chicago members and guests attended a wonderful reception in the home of member, Nancy Hunter. It was a beautiful venue with Lake Michigan, Millennium Park, Lake Shore Drive, the Museum Campus, and the well-known city skyline providing the perfect panorama as the setting sun made the view even more dramatic.

To begin the evening program, Donna Spivey, Chapter president, made a few welcoming remarks including the introduction of Mel Cooney-Higgins who will

be recognized as our “Person of the Year” at the annual Scholar Luncheon on October 26. Mel is a member of the Chicago Chapter, founder of the Cashel Foundation, and a long-standing supporter of ARCS Scholars.

Pat Anderson, VP Membership, who organized the reception, made a few comments and then asked each member to not only introduce her guest(s) but to tell us something special about each one. Guests, in turn, were asked to respond. Great conversation, open sharing of ideas and experiences, and lots of laughs ensued. A wonderful sense of camaraderie made this exchange among members and guests a highlight of the evening. Kudos to Pat for this marvelous idea.

Chapter member, Jan Walters, asked if she could share some thoughts, particularly for the guests, and we were so pleased that she did. “There are many organizations one could join in Chicago today, so why join ARCS Foundation? I think ARCS Foundation is for the curious – for those of us who are interested in continuing to learn, to support young, brilliant minds, and to have the privilege of supporting the growth of higher education in this country. By joining ARCS Foundation, we are able to join a dynamic group of women to do real work and, in the process, we get to meet some gifted and dedicated young scientists who are truly appreciative of the impact we make on their work and their lives.”

Guests at the reception included the wife of a scholar who just completed his studies last year, a former member who has just moved back to Chicago, and a number of women who were getting their first introduction to ARCS Foundation. We are thrilled that several guests immediately decided to become members and we look forward to introducing them soon on our new ARCS Foundation Website.

Thanks again to Pat and her committee for this excellent beginning to an outstanding year of programs and events currently planned for the Chicago Chapter.

*Donna Spivey
President, Chicago Chapter*



Donna Spivey and Mel Cooney-Higgins

Dr. Craig Barrett to Address 2011 Portland Chapter Scholar Awards Luncheon

The keynote speaker for the seventh annual Portland Chapter Scholar Awards Luncheon on October 18, 2011 brilliantly represents the nexus of science and business. Dr. Craig Barrett will address the luncheon attendees on the topic of "US Competitiveness in the 21st Century." Being competitive in science, engineering and medicine is what inspires, motivates and drives the Portland Chapter of ARCS Foundation.



Dr. Craig Barrett

Dr. Barrett is a leading advocate for improving education in the U.S. and around the world. He was appointed by President Obama as one of the private sector leaders of "Change the Equation," a national science, technology, engineering and math education (STEM) initiative. This initiative presents a striking parallel to the origins of ARCS Foundation, launched to support the advancement of science in the wake of Sputnik, over 50 years ago.

Born in San Francisco, Dr. Barrett attended Stanford University receiving Bachelor of Science, Master of Science and PhD degrees in materials science. After graduation, he joined the Stanford faculty in the Department of Materials Science and Engineering. Dr. Barrett was a Fulbright Fellow at Danish Technical University in Denmark and a NATO Postdoctoral Fellow at the National Physical Laboratory in England. He is the author of over 40 technical papers about the influence of microstructure on the properties of materials. He also wrote a textbook on materials science, "Principles of Engineering Materials."

Dr. Barrett is no stranger to the Pacific Northwest, having recently retired as chairman and CEO of Intel Corporation, Oregon's largest employer. Among his long list of civic, foreign affairs and technology contributions are serving on the Business Coalition for Student Achievement, the National Innovation Leadership Council and the Clinton Global Initiative Education advisory board.

A highlight of the day for the ARCS scholars and for Dr. Barrett will be the chance to meet prior to the luncheon. The audience will be galvanized by Dr. Barrett's keynote address, the scholars will receive their awards, and we will all acknowledge these gifted young scientists. We are confident that their genius will be recognized.

So They May Achieve...

It seems appropriate, 53 years after the founding of ARCS Foundation in Los Angeles, to highlight the young men and women who were among the first ARCS Scholars.

Joseph Fineman was the first ARCS Scholar in 1958 at the very first school supported by ARCS Foundation – the California Institute of Technology. He was followed in 1959, by Caltech ARCS Scholars David Butterfield and Rolf Richter.

Butterfield became Assistant Professor of Economics at McMaster University, Ontario, Canada. Richter, a chemical engineer and USAF pilot received an award for the development of a neutralizer against the toxicity of organo-phosphorous pesticides.

One year later, Harvey Mudd College and seven scholars were recognized by ARCS Foundation – Joseph Alsup, Joseph Barrera, Robert Beck, Michael Blasgen, Paula Hagedorn Diehr, Douglas Hunter and Michael KcKinney.

Blasgen, who received a Master's in Electrical Engineering and a PhD in Computer Science, worked on the Apollo program, joined IBM's Watson Research Center and later became the Director of the Austin Research Center in Texas. Beck earned a PhD in Mathematics at the University of Pennsylvania and is currently Professor and Chairman of the Department of Computing

Sciences at Villanova University. Hunter became a faculty member at the Defense Intelligence Agency.

Barrera, who earned a PhD in Electrical Engineering at Carnegie Mellon, created an operations group and product development group that went on to become Whisper Communications. He was also heavily involved at Harris Semiconductor Group, Harris Microwave Semiconductor, Hewlett-Packard and Loral Space Systems – and is “as busy as ever.”

Diehr, who was one of only two girls at Harvey Mudd College in 1960, is Professor Emeritus of Biostatics & Health Services, University of Washington. “She has done a great deal of research in disease prevention and “aging” learning that “older people are quite healthy.” That fact led to the discovery that the “fatness” standards should be changed because older people who are considered “overweight” are usually the healthiest.”

Achievers all who have shown what possibilities lie ahead for this nation’s young scientists. The members of the Los Angeles Founder Chapter could not be more proud than we are today as we strive to help brilliant scholars further their education.

*Gay Goerz
Co-President, Los Angeles Chapter*

“So they may achieve all they are capable of achieving.”

President Ronald Reagan

April 28, 1982

University of Arizona Students Advancing Scientific Knowledge Honored

By La Monica Everett-Haynes, University Communications, July 11, 2011

A group of 16 University of Arizona students have received ARCS Foundation Scholar Awards for their research and contributions to their fields.

Compressed sensing, a technique used to construct images from small amounts of data, may soon change the way signals are broadcast and interpreted and how astronomers see extraterrestrial objects, among other applications.

Benjamin Berman, a University of Arizona doctoral student studying applied mathematics, is employing the theory and technique in an effort help improve biomedical imaging, particularly with MRI.

“I can think about this from my mathematical point of view and, after that, interpret it from an applied side,” said Berman, who is testing the performance of algorithms developed by other researchers. “Will this work? It’s one thing to solve the math problem, but no point in it if it cannot be implemented.”

Instead of a radiologist making many measurements of an organ to develop an image, it could be faster and more feasible to use compressed sensing to measure a mere portion of data points, Berman said. This should result in swifter and reliable data and more comfort for patients, he added.

For his research and contribution to his field, Berman was named the recipient of an ARCS Foundation award alongside more than one dozen other UA students last month.

“The ARCS Foundation support is amazing,” Berman said, noting that he has especially enjoyed interacting with the foundation’s donors...

[Another ARCS Foundation award] recipient is Sarah Leung, doctoral student studying biomedical engineering.

Leung has spent years collaborating with Marek Romanowski, a UA associate professor of biomedical engineering and a BIO5 Institute member, on designing gold-coated liposomes.

Her research has been especially concerned with studying ways to protect healthy cells while killing off cancerous cells in humans.

For now, she is using optical trapping – using laser light through a microscope – to trap and study individual cellular activity. The research has implications for drug delivery and also for helping to better understand not only how cancers develop, but how they respond to different types of treatment.

It is the third year Leung has been awarded ARCS Foundation funding, having been named the organization's Steele Foundation Scholar last year.

"It's been really fantastic," said Leung, this year's Haga Scholar.



Sarah Leung's research is chiefly concerned with improved drug delivery. (Photo by Beatriz Verdugo/UANews)

Leung said she has used the funding to attend seminars and other events to conduct further studies and also present her research.

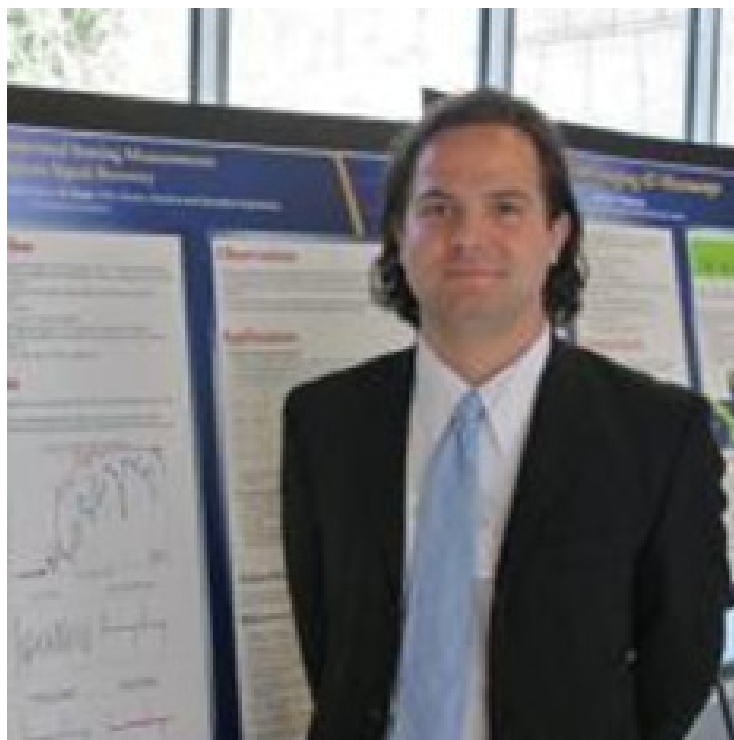
Leung also said that having Romanowski as a mentor has been "monumental" to her development as a scientist.

"It is definitely helpful to have a PI (principal investigator) who is fully supportive and who is willing to help in getting scholarships," Leung said. "That's huge."

Berman, who works with Ali Bilgin, a UA assistant professor of biomedical engineering and Bio5 Institute member, said he also is indebted to the external funding.

"They are making a huge difference that enables us to do the research we want to do," Berman said. "It's great to see so many people taking a genuine interest in science in such a way that they are enabling young people like myself to pursue more research."

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"Mathematicians are just looking for good problems, and a lot of good problems come from the medical field and applied side of things," said Benjamin Berman, a UA doctoral student studying applied mathematics.

Next Issue

*Mark your calendars
now!*

*ARCS Foundation
National Annual
Meeting*

Denver, CO

*May 30 - June 2,
2012*

*Detailed plans will
be featured in the
Winter Issue of
ACHIEVEMENTS.*

In Honor of Pat Beckman

Since Pat Beckman was deeply involved and supportive of both National and Chapter-level endeavors, there are multiple possibilities for honoring her that reflect the values she exemplified. Contributions in Pat's memory may be made to the National Endowment or Operating Funds, to your local Chapter or to any Chapter with which she was associated. In response to a desire to honor Pat's deep attachment to the Chapters and to the Presidents, the National Executive Committee has also proposed using memorial donations to enhance the leadership and non-profit management training workshops for Chapter presidents that are offered at our National Annual Meetings. A vote on developing a formal presidential training program of this kind will be taken by the Board in February. However, regardless of the existence of a formal curriculum, the option is always there to contribute to enhancing the training that National provides to Presidents and other Chapter leaders. If you wish to direct a national gift in memory of Pat Beckman, please send a check made payable to ARCS Foundation, Inc. and indicate in your transmittal letter specifically where you would like your donation to be directed. Please mail your check and statement of intent to:

Sherry Lundeen, Treasurer
ARCS Foundation, Inc
P.O. Box 240
Artesia, CA 90702-0240

Thank you in advance for your generosity in honor of a very special friend.

Jeanne B. Berdik
National President

Camille Uhler
Chair, Council of Advisors

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