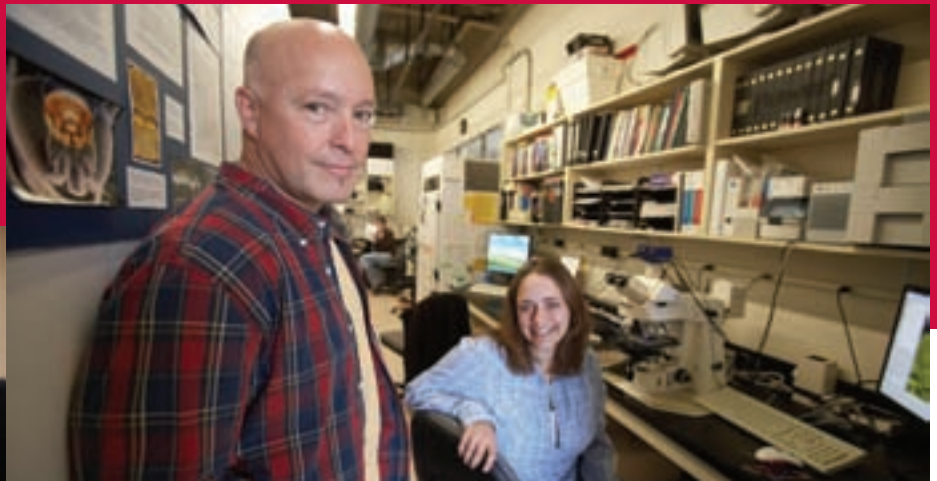
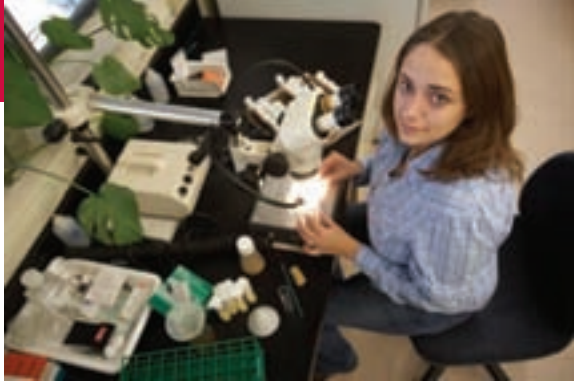


COLLEGE OF SCIENCES

university of nevada, las vegas

SPRING 2007



Fellowship student Christine Serway and professor Steven de Belle in the neurobiology research laboratory.

Inaugural Recipient of Fellowship Devoted to Neurobiology Research

Growing up in Clinton, New York, Christine Serway was always taught to respect nature.

Her love of the outdoors led her to pursue a Ph.D. in neurobiology at UNLV, where she is currently studying the learning process and memory of fruit flies.

Serway's research was boosted recently when she was named the first recipient of the Paul Ferguson Fellowship, awarded to a master's or doctoral student who demonstrates excellence in research and academics.

"Being a good scientist requires a great deal of focus, as well as a lot of hard work, and this fellowship has given me the perfect opportunity for both," Serway said.

The fellowship was established last year to honor Paul Ferguson, former vice president for research and dean of the UNLV Graduate College. Those chosen for the fellowship receive a tuition waiver and a \$20,000 stipend.

"Christine is a wonderful example of the creative and dedicated students in the



School of Life Sciences," said Dean Ronald Yasbin. "She is a most deserving recipient of this important scholarship."

Serway's path to the field of neurobiology wasn't a direct one. She attended the University of Colorado and majored in psychology.

But a biopsychology class re-awakened her interest in the sciences. She changed her major and began investigating the molecular phylogeny of tui chub, a species of sensitive fish from Nevada.

After graduation Serway accepted a seasonal position with the Department of Wildlife in Las Vegas. She saw where the tui chubs lived, fin clipped several hundred of them, and she came to love Nevada.

Serway contacted faculty in the School of Life Sciences at UNLV and joined the research laboratory of professor Steven de Belle as a technician, then enrolled as a graduate

student. Her plans for after graduation include a post-doctoral appointment outside of Las Vegas.

Serway is grateful for the opportunity to focus on her research thanks to the Ferguson Fellowship.

"I really believe that it takes a community to raise a good scientist," she said, "and I am very pleased to be part of the scientific community at UNLV." ●

UNLV
UNIVERSITY OF NEVADA LAS VEGAS

MESSAGE FROM THE DEAN



RONALD YASBIN
Dean, College of Sciences

Dear Alumni and Friends,

This year marks a watershed moment in UNLV history. As our students, faculty, staff, alumni, and friends prepare to celebrate our 50th anniversary, the College of Sciences can take pride in

several important accomplishments.

The college now receives more external funds than any other unit on campus. Our outstanding faculty members continue to secure highly competitive, peer-reviewed funds – this amount reached nearly \$20 million in fiscal year 2006.

As we strive to become a top-tier research college, our faculty and staff remain dedicated to offering the best undergraduate education and training in the sciences. With additional programs of study, expanded course lists, the successful recruitment and retention of talented faculty, and an expanded advising program, the college offers great educational opportunities for our talented students.

We continue to plan for the future as we strive to meet today's challenges. The Science and

Engineering Building – all 200,000 square feet – is now a recognizable edifice on campus. At the same time we are in full gear with planning efforts for a companion facility, a science and mathematics building, designed to meet the needs of our undergraduate teaching and laboratory programs.

The strategic plan for the College of Sciences, available online at <http://sciences.unlv.edu/strategicPlan.html>, outlines our best efforts to identify and prioritize teaching, research, and community service goals for the next several years. This plan serves as our bellwether, yet the design is flexible enough to accommodate the seemingly instantaneous changes in the local, regional, and national environment.

I appreciate your continued interest in the College of Sciences and I hope you will take a moment and contact us, whether by e-mail, telephone, or the form printed on the back of the newsletter. Our alumni, friends, and supporters are an integral part of the College of Sciences family and I look forward to hearing from you. ●

Sincerely,

Ronald Yasbin
Dean, College of Sciences

With additional programs of study, expanded course lists, the successful recruitment and retention of talented faculty, and an expanded advising program, the college offers great educational opportunities for our talented students.



Invent the future, leave a legacy. Charitable giving can play an important role in planning for your family's and your estate's future. Your gift through a charitable gift annuity, bequest, pooled income fund, or other means can have a meaningful impact on the College of Sciences.

Membership in the Dean's Associates Program. This gift club recognizes donors who give \$1,000 or more to support Dean Ronald Yasbin's vision for the college. Members will receive UNLV Magazine and invitations to campus and community events.

“How Can I Help the College of Sciences?”

For more information about giving to the College of Sciences, contact Nancy Strouse at (702) 895-2810 or nancy.strouse@unlv.edu.

Pledges through the Rebel Ring Phonathon. This spring, students will phone our alumni and other friends to share College of Sciences news and ask for support of its programs.

Geoscience Professor Receives UNLV's Top Research Award



Geoscience professor Eugene Smith's research in the field of volcanology, including the probability of volcanic eruptions near Yucca Mountain, earned him the 2006 Harry Reid Silver State Research Award.

This award was established in 2001 to honor the contributions of Sen. Harry Reid to research at UNLV. The award focuses on research that positively impacts the local community and the state of Nevada.

Throughout his 26 years at UNLV, Smith has developed an impressive record of researching volcanoes. He is also currently studying the geology of the new Sloan Canyon National Conservation Area south of Henderson and large stratovolcanoes related to the Ring of Fire in Alaska and Kamchatka, Siberia, which contain much of the world's volcanic activity.

Winners of this award receive a \$10,000 stipend and a medal presented at UNLV's academic recognition ceremony. ●

Physics and Astronomy Department Celebrates Name Change

The department of physics has been renamed as the department of physics and astronomy, effective Jan. 1.

The name change marks the department's strides in the field of astronomy in recent years. Last year, the College of Sciences added a graduate program in astronomy. This action recognizes the teaching and research efforts of several astronomy and astrophysics faculty members in the physics department.

Professor Emeritus Donna Weistrop as well as professors Steve Lepp and Jim Selser were instrumental in strengthening the physics, astronomy, and astrophysics programs. ●

Exxon Mobil Plucks Fresh Geoscience Grads



Members of the student chapter of the American Association of Petroleum Geologists hike toward towers of Permian Cedar Mesa Sandstone in Utah's Canyonlands National Park. Exxon Mobil funded their research trip.

UNLV geoscience graduates make excellent researchers, according to Bob Stewart, a recruiter with Exxon Mobil, who ranked the university as the second most common alma mater for new hires at the company.

Not only is Exxon Mobil snatching up UNLV geoscientists, it's also supporting the program by funding field research.

"We support field research because we think it is critical to developing fundamental skills in geoscience," said Stewart, who makes regular visits to UNLV to interview students for research positions.

"The fact that UNLV takes excellent advantage of the outdoor laboratory available in Southern Nevada is one of the primary reasons we are able to find so many outstanding geologists," he said.

"Field experiences simply make for better geoscientists," Stewart added. "UNLV teaches important fundamentals, builds on these fundamentals with critical field research programs, and therefore produces graduates we covet."

UNLV is at the top in Exxon Mobil's ranking system that determines where it recruits and spends its research dollars, Stewart said. Some other geoscience programs in this category include those at Stanford University, Colorado School of Mines, Imperial College in London, and Pennsylvania State University.

"UNLV geoscience students compare very favorably with those at other universities. We see that a great percentage of UNLV students are of a very high quality," Stewart said. ●



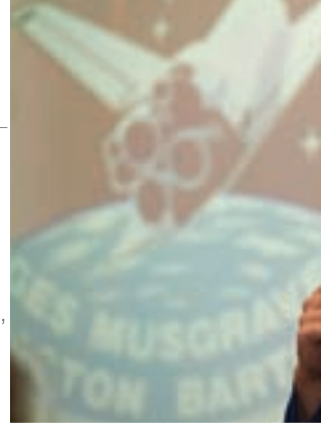
Future Scientists Battle at Science Bowl

The scientific leaders of tomorrow competed in the 16th Annual Nevada Regional Science Bowl at UNLV earlier this semester with Reno High School prevailing over 31 other high school and middle school teams.

Teams consisting of four students each from schools in Nevada, California, Arizona, and Utah were quizzed in the areas of biology, chemistry, physics, mathematics, astronomy, earth sciences, and computer science in a fast paced, round robin format similar to "Jeopardy!"

Reno High School defeated Las Vegas' Advanced Technologies Academy in the final round by a score of 66 to 40. The Reno team, which won a prize of \$5,000 to be used in its math and science departments, will represent the Nevada region at the National Science Bowl in Washington, D.C. later this spring.

Advanced Technologies Academy received \$2,500 for its second place finish, and The Meadows School, also from Las Vegas, finished third and was awarded \$1,500.



Mary Scodwell, Nevada Site Office, NNSA.

Roy D. Bridges Jr., a former NASA astronaut and pilot of the Space Shuttle Challenger from July 29 to August 6, 1985, served as the keynote speaker at this year's science bowl luncheon.

"I flew on the Challenger for eight days and 126 orbits around the earth," Bridges said. "That experience was just awesome. I was preparing to fly again on the Challenger when the accident happened in 1986. It was a very heartfelt tragedy, and it changed all of our lives."

Smith Named Interim Head



Stanley D. Smith, professor in the School of Life Sciences, has been appointed interim associate vice president for research services.

Smith joined UNLV in 1985 and has since been the recipient of many prestigious awards, including the 2006 Barrick Distinguished Scholar Award, 2003 Harry Reid Silver State Research Award, and 1997 Regents Outstanding Faculty Award.

His primary research interests include global change, desert ecology, and plant physiological ecology. He has been successful in receiving funding through the Experimental Program to Stimulate Competitive Research and national peer-reviewed grants.

Given his background in research, Smith is familiar with the research challenges facing our campus. In his letter of interest for the position, he promised hard work to improve UNLV's research infrastructure, and indicated a willingness to work with researchers across the campus to advance the research reputation of the university. ●

Primus Corporation Donates Scientific Equipment

Primus Corporation, a leader in in-vitro diagnostic testing with laboratories around the world, recently donated four high performance liquid chromatography analyzer systems to UNLV for use by undergraduate and graduate students.

Two units are now housed in the chemistry building. This equipment will help students gain familiarity with the principles of HPLC for chemical separations.

Primus Corporation manufactures analytical systems for the medical field which are used to diagnose and monitor patient health.

Primus project manager, Jon Davis, who graduated from UNLV in 1993 with a degree in chemistry, and Thomas J. Reidy coordinated the donation and installation of the units.



The Meadows School in competition (above). Roy D. Bridges, former NASA astronaut, shares his experiences with the student scientists (left).

The regional science bowl is a proud tradition at UNLV.

Teams and supporters

have been gathering on campus for the bowl since 1991. While on campus the students meet UNLV professors, graduate students, and staff who offer an introduction to research programs at UNLV.

The Department of Energy established the National Science Bowl to motivate high school students to pursue scientific and technical careers and to promote science and mathematics literacy. The questions asked during the competition are submitted by

Department of Energy scientists and university professors. More than 100,000 students from across the country have participated in the competition over the past 16 years.

The Nevada Regional Science Bowl sponsors include the Atomic Testing Museum; Bechtel SAIC Company; U.S. Bureau of Reclamation; Desert Research Institute; National Security Technologies; Northrop Grumman; Stoller-Navarro Joint Venture; UNLV; U.S. Nevada Site Office of the Department of Energy's National Nuclear Security Administration; U.S. Department of Energy's Office of Repository Development; and Wackenhut Services. ●

The Sweet Taste of Successful Research

Biology professor Michelle Elekonich is creating a buzz about UNLV and its research capabilities.

She has helped unlock the genetic code of the European honey bee and is studying how the creatures respond to long-term heat stress.

This is important because bees possess the same muscle tissue and heat shock proteins as humans, but they can survive temperatures up to 122 degrees Fahrenheit without producing significant amounts of these proteins.

Elekonich and some 170 colleagues worldwide are credited as co-authors of a report on the honey bee genome published in the October 2006 issue of *Nature*.



To facilitate her research, Elekonich keeps hives holding tens of thousands of bees outside her office, which produce a delicious quantity of "UNLV Honey," a prized delicacy on campus. ●

Share Your Memories

UNLV's 50th anniversary committee is still looking for memorabilia for an exhibition to be displayed this fall at the Barrick Museum.

The temporary exhibit will be the biggest the museum has hosted and it will chronicle UNLV since the opening of its first building, Maude Frazier Hall, in 1957.

Organizers are most interested in uniforms, megaphones, beanies, homecoming sashes, correspondence and university documents, programs, posters, tickets, student election paraphernalia and personal snapshots. The items will be returned. For more information on how to donate, visit <http://celebrating50.unlv.edu/index.html>.

INVENT THE FUTURE

Emeritus Professor's Scholarship Endowment Helps Star Students of Astronomy

As a leading astronomer, emeritus professor of physics Donna Weistrop opened the heavens to her students.

Now, Weistrop and her husband David B. Shaffer are opening the door to advanced scientific study for graduate students by establishing an endowed scholarship.

The Donna Weistrop and David B. Shaffer Scholarship will support graduate students enrolled in the disciplines of astronomy, chemistry, geoscience, or physics who maintain a 3.25 cumulative grade point average. Preference will be given to students in astronomy and physics programs, areas of particular interest to the donors.

"During her distinguished academic career Donna Weistrop touched the lives of countless UNLV students, faculty, staff, friends, and area residents," Dean Ron Yasbin said in announcing the award.

"With this generous scholarship, Donna and David expand their reach and touch the lives of future generations of UNLV students," he added.

During her noteworthy career, Weistrop devoted countless hours to things she could not touch. She was part of a team that developed an instrument on the Hubble Space Telescope and analyzed data gathered from distant galaxies. And, all the while, she shared her expertise to students in both introductory and advanced astronomy classes.

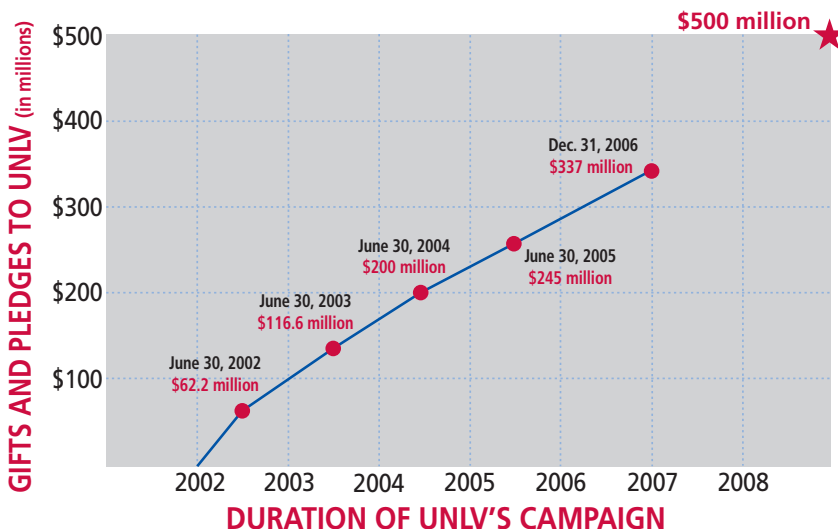
The College of Sciences considers endowed scholarships such as Weistrop's and Shaffer's to be among its top funding priorities. The college hopes to attract additional private support through the Invent the Future campaign for more scholarship endowments, which will allow the students who receive them to concentrate fully on their studies.

Weistrop is also committed to the unending search for knowledge – as a teacher and a student.

"There's this amazing thing that happens when you're working with graduate students," she said. "Around the time they finish their master's and start working on the Ph.D., they just blossom. They transform from student into colleague — instead of me teaching them, we start learning from each other." ●

COLLEGE OF SCIENCES CAMPAIGN FUNDING PRIORITIES

- Science and engineering building
- Math and science education building
- **Scholarship endowments**
- Center for Urban Agriculture and Water Conservation
- Graduate student fellowships
- Endowed chairs and professorships



Invent the Future is UNLV's first comprehensive effort to secure the promises of tomorrow through a \$500 million fundraising initiative. With your help, private funding for students, faculty, research, facilities, and programs will map a course for Las Vegas' next decade.



DONOR HONOR ROLL

This roll of honor recognizes the contributors to College of Sciences from Feb. 1, 2006 to Feb. 22, 2007. The college wishes to thank the following individuals, corporations, and foundations for their generous support. Every gift to UNLV is valued. It is important to us to recognize all donors correctly. Please notify the UNLV Foundation at (702) 895-3641 of any discrepancies.

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David Shaffer and Donna Weistrop recently established a scholarship endowment for astronomy studies.

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Devinder Saini: Advisory Board Founder

As a founding member of the advisory board for the College of Sciences, Devinder Saini has not only donated much-needed equipment and funds for laboratory

work, he has also contributed time to helping shape the growth of the college.

Saini is vice president of OxySense, a company that manufactures non-invasive oxygen management systems for sealed packages for the food, beverage, pharmaceutical, medical, and electronics industries.

He helped to create the advisory board for the college in 2005.

“OxySense, Inc. and I are excited to partner with the outstanding students and faculty at UNLV,” Saini said. “Our collaborations in the laboratory, classroom, and workplace demonstrate the virtues of public-private partnerships. We look forward to expanding our efforts in the future.”

He earned a Ph.D in physics from City University in London, a master’s degree in materials science

from Thames University, and a bachelor’s degree in physics and astrophysics from the University of London.

Saini holds nine patents and has over 50 publications in the field of sensors. He has also developed diode pumped solid state lasers, laser heated single crystal fiber growth apparatus, and pressure and gas sensors.

As a scientist and businessman, Saini has collaborated with a number of faculty members in the chemistry department, including associate professor David Hatchett, a specialist in environmental and analytical chemistry. This research, supported by OxySense, has provided funds for student stipends and chemicals and laboratory equipment.

OxySense has donated three gas chromatographs to support the work of UNLV faculty and students, and the company has also placed one of their commercial instruments in UNLV lab space for our use in evaluating candidate materials.

Student and faculty research publications generated from Saini’s contribution to the college include a master’s thesis, several academic manuscripts, and a provisional patent application. ●

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COLLEGE OF SCIENCES

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