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San Diego Story. The unique synergy between San Diego and San Diego State.
A Gwynn-Gwynn Situation. Tony and Anthony Gwynn both love baseball—and SDSU.
The Universal Scientist. When disciplines converge, researchers collaborate.
One Singular Sensation. Musical theatre hopefuls polish their acts.
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**Exploring the Micro and the Mammoth**

By Coleen L. Geraghty

In film and fiction, university science labs are often depicted as soundless, sterile chambers tucked away in some deserted corner of campus and permanently off limits to the public. Get real.

San Diego State’s core scientific facilities are bustling hubs. Thousands of students, faculty and private researchers stream through each year, working individually or on group projects. A degree of disorder is part of the equation.

Two of these facilities are about to become even more user-friendly. With new equipment and improved computer interfaces, SDSU’s Electron Microscope Facility and Mount Laguna Observatory will be more accessible than ever to undergraduates, other CSU constituents and the general public.

**Atomic Insight**

A $390,000 grant from the National Science Foundation recently enabled the university to purchase a new transmission electron microscope, as well as a high-resolution digital camera to enhance the instrument’s operation. Motorized and computer controlled, the new microscope can automatically collect images of a researcher’s sample during a stable, controlled rotation. The result: an accurate reconstruction of the sample quickly captured, then displayed on a high-resolution monitor. Steve Barlow, who operates the Electron Microscope Facility, is delighted. “No longer will we have to sit in a dark room pores over a faintly glowing screen through binocular eyepieces,” he said. “The new scope is operated in dim light, not darkness, and the computer monitor displays the image with considerably more contrast and better resolution.”

A second type of electron microscope, which scans the surface of samples rather than transmitting beams of electrons through them to produce images, is also available in the lab. Barlow will continue to use this instrument in his outreach work with Clear View Charter School in Chula Vista. Through an existing cable hook-up between the lab and the school, students can see their own pre-prepared samples of plants, insects, pollen, sand and dust mites on a classroom computer screen linked to the microscope viewing screen in the SDSU laboratory 14 miles away. The microscope operator controls the focus and magnification, and a fixed camera in the lab allows students to videoconference with Barlow and other SDSU scientists.

**New Horizons**

About 40 miles east of the Electron Microscope Facility, at a dark site in the Cleveland National Forest, San Diego State’s Mount Laguna Observatory also serves campus and community. Its primary research instrument— a 40-inch reflector jointly operated by SDSU and the University of Illinois at Urbana-Champaign. Also on site are 24-inch and 16-inch telescopes for student, faculty and independent researchers, plus the 21-inch “Boller Visitors’ Telescope,” donated by Regional Boller for use by SDSU general education students, accredited school groups and participants in special public programs. The general public may also join the Mount Laguna Observatory Associates for access to special observatory events.

The observatory, the only facility of its kind in the California State University System, operates under a special-use permit from the U.S. Forest Service, which recently challenged SDSU to increase accessibility for visitors with disabilities. As a result, the telescope will become more usable for students as well.

“The issue is enabling people to look through the telescope if they’re unable to climb the ladder,” explained Paul Excel, astronomy department chair and the observatory’s director. “We can’t lower the telescope; it needs a certain range of motion.”

Instead, SDSU astronomers envisioned a remote, computer-operated system that would allow users seated in the visitors center to control a modest-sized, 10-inch telescope by pointing and clicking on a graphic of the sky.

**New Horizons**

“The solution opened up some new horizons for us,” Excel said. “We thought, why not extend that capability to our beginning astronomy students? They’ve been using our campus telescopes for lab classes, but the nights are usually too cloudy for good viewing because of the marine layer. Why not set up computers on campus with remote control of a Mount Laguna telescope? Additionally, our undergraduate majors would have an exciting tool to initiate their own research projects, which would carry over to further research at Mount Laguna under faculty direction.”

A $60,000 grant from the O.P. & W.E. Edwards Foundation will support a graduate student for three years to develop the remote system and help upgrade the existing 40-inch telescope’s control system, among other duties. Excel predicts a day when newer and larger telescopes at Mount Laguna will be controlled over the Internet. Eventually, the link could be extended to all CSU campuses where astronomy is offered.

Tom Scott, dean of SDSU’s College of Sciences, applauds the university’s advances in exploring both inner and outer space. “For most of human history, our inquisitiveness about the natural world has been limited to what our senses could convey and our minds imagine,” he said. “In rapid succession, about 400 years ago, came the invention of the microscope and the telescope. The Electron Microscope Facility and the Mount Laguna Observatory are SDSU’s ultimate vehicles for informing people of what the micro and the mammoth worlds hold.”

For more information, call 619-594-6182 or check online at [http://www.sci.sdsu.edu/emfacility/](http://www.sci.sdsu.edu/emfacility/).
Horizons

Global Security. Addressing international issues demands big-picture perspective.

By Coleen L. Geraghty

Choose an academic program that best reflects San Diego State's distinctive assets – its diverse international population, its renowned yet practical academic offerings, its extensive community outreach – and that program might well be ISCOR, the study of International Security and Conflict Resolution.

Unique within the California State University (CSU) system, San Diego State's ISCOR program takes a multidisciplinary approach that also distinguishes it from international relations and global security programs at most other universities. This broad perspective was ISCOR's hallmark from the start, notes David Johns, professor emeritus of political science and the man credited with shepherding ISCOR along the thorny path to CSU approval.

"In the mid-80s, a number of us at SDSU became concerned that our academic disciplines were too narrow," Johns recalls. "A student could not examine the international picture by majoring in history or political science. We needed something outside the existing disciplines that took account of human rights, of globalization, of environmental issues and of international organizations."

Johns, with physicist Alan Swedler, biologist Roger Sabbadini and political scientist Dipak Gupta, envisioned a program spanning three colleges: Sciences, Arts and Letters, and Professional Studies and Fine Arts. It seemed an unorthodox approach to many.

"People thought it was ridiculous to involve three colleges," Gupta says. But the founding board was adamant. "How can you expect a historian to teach about anthrax?" Sabbadini asks. "We knew that to address international security issues, we had to draw from a variety of disciplines."

InTELLECTUAL CAPITAL

ISCOR students take four core courses, supplemented by classes in a wide variety of disciplines relating to one of three specializations: global systems, environment and security, or cooperation, conflict and conflict resolution.

Jeffrey McIllwain, director of the program, is currently planning a fourth specialization in homeland security, which he believes will be unique in the field. "I see SDSU becoming the intellectual capital of this emerging discipline," he says. "We could be the beta site for scholarly analysis of changes that occur in the name of homeland security."

Already, ISCOR instructors often adapt course material to address events with ties to global security and conflict resolution. After the Sept. 11, 2001 terrorist attack, for instance, lecturer Lisa Maxwell scrapped her next few lesson plans and invited students to express their personal reactions to the event. "It became a lesson in how to facilitate difficult issues," she says.

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Academic Excellence

P A S S A B L E  E N T H U S I A S M

The flexible and comprehensive nature of ISCOR seems to appeal especially to nontraditional students. Of the 120 or so enrollees in the curriculum, many are ROTC cadets or international students. Others are pursuing degrees after years in the work force.

But all share a common characteristic – a palpable enthusiasm for a program that, in the words of student Leonie Wichert, "is at the same time broad and diverse and very specific and particular."

In addition to completing classes, ISCOR students must write a thesis or serve an internship in a government or private agency involved in international security or conflict resolution work.

Most students choose the internship, which becomes the culmination of a "highly practical education in the field of world affairs," says ISCOR adviser Allen Greb. In 2003-2004, study abroad will also become a mandatory component of the program.

INTERNERSHIPS

For her internship, Wichert, who is from Germany, spent a semester in Washington, D.C., with the Atlantic Council of the United States, a nongovernment organization that promotes constructive U.S.-leadership and engagement in international affairs. She intends to work in Washington before returning to school for a degree in human rights and international security.

SDSU alumnus Hunan Arshakian is now secretary of the Foundation to Support Humanitarian Programs, the San Diego-based organization he joined as an ISCOR intern. Fluent in five languages, Arshakian helps the foundation implement social projects in Russia with funds from the Departments of State and Commerce.

Edwin L. Hom is one of many ISCOR students who interned at the San Diego Mediation Center. After graduation, he applied for a job with the center and is now an alternative dispute resolution specialist.

With each graduating class, ISCOR students bring to the work force a genuine understanding of world affairs coupled with a commitment to conflict resolution. Reflecting the success of a multidisciplinary program pioneered by San Diego State 20 years ago, these assets could not be more relevant in today's world.

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The situation troubled San Diego philanthropist Sol Price, who launched a community renewal effort and in 1998 challenged SDSU to help revitalize education in City Heights. The dual mandate: instructional improvement for students and professional development for teachers.

Funded initially by an $18 million grant from Price Charities, San Diego State responded with the City Heights K-16 Educational Collaborative, a partnership with San Diego City Schools, the San Diego Education Association, plus teachers and parents. SDSU now manages three City Heights schools, while also providing on-site teacher education leading to credentials and master's degrees. With test scores, attendance and teacher retention already improving, City Heights is once again looking toward a brighter future.

City of Hope
The City Heights Collaborative

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Like all good stories, the story of San Diego springs from relationships between characters, perhaps none more influential than the interaction between a young town and a tiny teachers’ school that grew into San Diego State University. Over a span of 106 years, San Diego and San Diego State have evolved together, enriching individual lives and building a human infrastructure strong enough to support a growing metropolis.

Today, the resulting synergy permeates countless conversations, decisions and endeavors, in every sector of commerce, at every level of society. Linked by history and destiny, the San Diego region and San Diego State University have forged a dynamic interdependence, each strengthening the other, and together creating a greater whole.

By Sandra Millers Younger

San Diego at the dawn of the 21st century is at once diverse and singular, an amalgam of native Californians, frost-belt refugees and global-village expatriates—San Diegans all. And all touched daily by the permeating influence of San Diego State University.

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From its ideal location on the Pacific Rim, just next door to Mexico, San Diego anchors a region poised for success in an era of growing internationalism. Increasingly, the workforce here must possess not only professional skills, but global savvy.

SDSU is answering this challenge, building worldwide educational partnerships and multiplying international learning opportunities. The most comprehensive of these initiatives is SDSU's undergraduate international business program, one of the biggest and best, offering the nation's No. 1 study-abroad program.

More than 750 SDSU students are currently pursuing the international business degree, a rigorous academic endeavor demanding internships, regional studies, study-abroad credits and foreign language proficiency in addition to the typical business coursework.

SDSU also offers several transnational degrees, including the nation’s first triple-degree program, requiring coursework at partner universities abroad.

International business program chair Steven Loughrin-Sacco sees such opportunities as crucial to developing international perspective among San Diego’s future leaders. “You can’t make them global if you keep them local,” he explains.

Global Think
The International Business Program

Heart and Soul
The SDSU Heart Institute

Coming together from both campus and community, a growing number of San Diego’s health professionals share a common passion: to eliminate cardiovascular disease, the No. 1 killer of American men and women. More than 40 of these individuals also share an affiliation with the SDSU Heart Institute.

Organized in 1999, the group comprises faculty, staff and students from four of SDSU’s seven colleges, along with several prominent San Diego-area physicians and scientists. This interdisciplinary blend of talent has created “a research powerhouse,” says Christopher Glembotski, institute director, professor and chair of SDSU’s biology department.

Attracting more than $5 million in external grant funding for 2001-02, Heart Institute researchers are engaged in analyzing the molecular basis of cardiac disease, developing gene therapies for its treatment, establishing new means of prevention, and teaching the public, including schoolchildren, the ABCs of healthy hearts.

What’s more, SDSU’s entrepreneurial approach to research enables faculty to fast-track their discoveries directly to the public through campus-based ventures. Biology professors and Heart Institute colleagues Roger Sabbadini and Judith Zyskind have each launched companies based on their research. Sabbadini’s Medlyte Inc. is working to revolutionize the diagnosis and treatment of coronary disease. And Zyskind’s Elitra Pharmaceuticals, now a part of Merck, is developing a promising new breed of antibiotics.

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Now a comprehensive urban campus of 34,000 students, SDSU is recognized by the Carnegie Foundation as a “doctoral/research university-intensive,” a designation granted to only the top 6.7 percent of the nation’s institutions of higher education.

In a very real sense, the city and its first university grew up together, each providing at every turn the support the other needed to take the next step. As San Diego matured, San Diego State reinvented itself and again to meet evolving regional needs. Expanding academic offerings, strengthening the faculty, upgrading athletics programs, establishing satellite campuses, initiating regionally focused research—San Diego State paralleled the city’s trajectory through a period of explosive growth. By 1980, serving a population of 1 million, San Diego’s Normal School had become the nation’s 10th-largest university.

Along the way, customized curricula helped advance the city’s key industries, first aerospace and, recently, technology and hospitality. Special initiatives met regional crises. In the early 1990s, for example, SDSU responded to military and aerospace downsizing with a comprehensive Defense Conversion retraining program. Since Sept. 11, 2001, terrorist threats have triggered a wide range of sophisticated homeland security initiatives that partner SDSU researchers with civilian and military specialists.

Entering the 21st century, San Diego State University remains committed to its threefold mission of education, research and service—and to goals set in 1997 as part of the Shared Vision compact initiated by President Stephen L. Weber. Moving toward these benchmarks, SDSU is distinguished by:

• Academic excellence: More students than ever are applying to SDSU, and they’re bringing better qualifications as admissions criteria become more selective. In 2002, faculty brought a record $140.4 million in research grants and contracts to the university. And all across campus, you’ll find top-flight departments, such as international business, No. 12 in the nation, and entrepreneurship, No. 20, as ranked by U.S. News & World Report.

• Vibrant diversity: On the Mesa, student and faculty demographics reflect an unwavering commitment to diversity, confirmed by independent rankings that placed SDSU No. 10 in the nation for baccalaureate degrees awarded to minorities.

• Wise cultivation of resources: Private giving to SDSU has jumped dramatically in the past three years, hitting $52.7 million in 2001-02, a target attained by only a small percentage of universities nationwide.

• Learning-centered community involvement: Beyond labs and classrooms, students gain knowledge through real-world experiences, such as tutoring inner-city school children, interning for San Diego-based businesses or monitoring regional ecosystems.

• Global opportunities: More than 180 international exchange partnerships offer study-abroad experiences in 40 countries, some leading to transnational degrees. Many of these opportunities exist within the international business curriculum’s study-abroad program, recognized in 2002 as the best in the nation by the Institute of International Education.

A number of innovative town/gown partnerships are combining these objectives. Countering effects of a nationwide nursing shortage, for instance, SDSU Nurses Now has enabled the School of Nursing to expand enrollment by hiring additional nursing faculty with funds contributed by area healthcare organizations.

Similarly, industry donations helped launch two new academic programs—Hospitality and Tourism Management and Construction Engineering Management—to produce homegrown leadership in those fields. And community partners led by QUALCOMM Incorporated have helped fund the Entrepreneurial Management Center (one of eight NASDAQ centers of excellence nationwide), which reciprocates by returning business professionals to the local start-up sector.

These stunning success stories may well presage a new paradigm of interaction between San Diego State University and the region it serves, continuing a tradition begun long ago in a downtown drugstore.

Sandra Millers Younger is editor of 360 Magazine.
Tony Gwynn talks proudly about the day he smacked a low line drive past second base and became the 22nd player ever to accumulate 3,000 major league hits. But the pride in his voice has nothing to do with his own astonishing accomplishment. Tony Gwynn is much prouder of his son, Anthony Keith Gwynn Jr., who wasn’t even in Montreal that day, Aug. 6, 1999, to see his father make history.

Anthony, then 16, could have been there, would have loved it. Earlier that week, he had traveled to St. Louis with a contingent of 40 Gwynns and friends, all hoping to witness the big moment. But the St. Louis series ended one hit shy of the record books, and Anthony Gwynn was out of time. He had commitments elsewhere, promises to keep — to others, to himself and to the game he had already come to love as much as his father did.

Anthony had been invited to play in the Area Code Games, a showcase of the nation’s top high-school baseball talent, staged especially for college and professional scouts. Held that year in Long Beach, it was an opportunity no serious aspiring player, not even the son of a baseball legend, could afford to pass up. So with his father poised on the threshold of history and the rest of his family en route to Canada, Anthony Gwynn headed home to California.

Tony Gwynn sees that decision as a turning point, the moment Anthony proved he had
absorbed his father’s lessons about baseball—and life. Lessons about the value of discipline, effort and consistency, about the direct relationship between commitment and success. In short, the legendary Tony Gwynn work ethic.

“Yeah, definitely,” Tony says of Anthony, now a sophomore center-fielder at San Diego State. “I am extremely proud. Especially from that moment on ... I ended up getting the hit, I ended up seeing it on TV. But he had things he had to do, and from that point on, he’s really done everything basically on his own. He’s done it through hard work, perseverance and dedication.”

To Tony Gwynn, dedication is everything. Gwynn fans call it loyalty. They point to Tony’s remarkable 20 years in major league baseball, a career studded with hard-earned superstardom, yet spent in one city, with one team. They mention Tony’s strong family ties, his lasting marriage to his childhood sweetheart, Alicia; his many quiet acts of generosity and community service. Most recently, they talk about his coming retirement and his well-publicized desire to return to his alma mater and continue the legacy of his mentor and friend, Jim Dietz, as head baseball coach at San Diego State University.

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just sitting back and being quiet about it, I felt like I should shout it to the world, "Hey, I'm interested in this job.""

The world shouted back. Most, including Dietz, loved the idea. "I think it's wonderful," Dietz says. "His name alone would add a lot, not only to the baseball program, but to San Diego State." But even Dietz, who knows Tony as well as anyone, wondered why a future Hall of Famer would want to coach college ball. "I asked him why — Why do you want to do this?" Dietz says. "He felt like this was his calling. And when Tony says something like that he really means it. I could tell by looking into his eyes.

"Some people have a hard time understanding," Dietz continues, "but that's just the way Tony is. That's his loyalty to San Diego State and the city. You don't ask why. You just applaud it."

Tony's enthusiastic bid for the SDSU coaching job, reported nationwide with news of his retirement, raised both hopes and concerns for SDSU Athletics... The word-shouted back. Most, including Dietz, loved the idea. "I think it's wonderful," Dietz says. "His name alone would add a lot, not only to the baseball program, but to San Diego State." But even Dietz, who knows Tony as well as anyone, wondered why a future Hall of Famer would want to coach college ball. "I asked him why — Why do you want to do this?" Dietz says. "He felt like this was his calling. And when Tony says something like that he really means it. I could tell by looking into his eyes.

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Tony isn't worried about that. "I really want to do my homework, because it's more than coaching," he says. "That's the thing a lot of people think I don't have a grasp on already, and I really do. I really know that it's a lot of administrative stuff, NCAA rules you have to learn. There's recruiting, fund raising. There's all kinds of stuff."

There's also caring for the field at SDSU's handsome, 4-year-old baseball venue. Funded largely by John and Becky Moores, it bears a familiar name: Tony Gwynn Stadium.

**THAT PERSONAL CHALLENGE**

Ask Tony Gwynn what he loves most about baseball, why he keeps training so hard, grinding through rehab every day, scrutinizing videos of himself and opposing pitchers, traveling week after week when he'd rather be home with his wife and kids, and you'll discover a thread that runs through his entire career, all the way back to his Aztec days.

"I love that personal challenge," he says. "Baseball's a great game because it's a team game. But when

Tony with Padres owner John Moores
A LOT OF GWYNNS

Moving up to the big leagues, Tony encountered the same test of dedication Anthony faced in St. Louis. “I basically had come to the conclusion that I’d played baseball for seven straight years, but I never really worked at it,” he says, “and it was time to start working at the game and trying to see how good a player I could be.”

His timing, as always, was impeccable. Dietz recalls that the Padres in those days “were going through tough times. They needed prospects, players able to move through the system with a very short time in the minor leagues.”

Tony did that. “Sometimes it’s just fate where you end up,” he says. “It’s like my brother. My brother got drafted by the Dodgers and never really got a chance to be a big guy in a big league, where I got drafted by the Padres, and it was just a perfect fit. I was in the right organization at the right time. I got to move up the ladder real quick, and a year later I was in the big leagues.”

Tony’s major league brother, Chris Gwynn, had also played for SDSU, as well as the 1984 United States Olympic team, and later joined Tony in the Padres dugout. Today he runs an inner-city baseball program and scouts for the Padres. The Gwynn legacy at San Diego State also

Continued on page 31
A half-century ago, three researchers jointly unraveled the secret of life, and simultaneously authored in a new era of collaboration among scientists. Biologist James Watson, physicist Francis Crick and biophysicist Maurice Wilkins received the Nobel Prize in 1962 for their discovery of DNA’s double helix structure.

In 2003, exactly 50 years after their breakthrough, several hundred scientists working together in the Human Genome Project completed identification of the 30,000 or so genes in human DNA—a collaborative effort of enormous significance.

Without a doubt, collaboration drives the sciences today. Leading the way among research institutions, San Diego State University supports extensive faculty collaboration and significant interaction with local business and industry to engender high-caliber education and research.

Tom Scott, dean of the College of Sciences, noted that SDSU’s current faculty are not only more involved in research than their predecessors, but also tend to collaborate more. “They have larger grants and projects that lead to greater interaction and create a scientifically rich agenda for students at all levels of education,” Scott said.

San Diego State’s status as a collaborative research powerhouse excites young faculty members like Matt Anderson, a laser physics professor who came to campus three years ago from a post-doctoral position at the University of Rochester. His work demands close consultation with engineers and biologists.

“The shift to a research orientation is evident in the number of grants we are getting and the number of scholarly articles written by faculty here,” Anderson remarked. “The newer faculty would like to see even more emphasis on collaborative research to increase SDSU’s exposure in the scientific community.”

Dozens of campus-affiliated research centers now distinguish San Diego State. The Heart Institute, the Center for Microbial Studies, the Immersive Visualization Lab, the Center for Behavioral Epidemiology and Community Health Studies, and the Center for Research in Biology professor Stanley Maloy and Ph.D. student Angel Rivera examine how proteins bind to salmonella DNA.

Indeed, grant money awarded for research within the College of Sciences rose nearly 20 percent—from $23,564,566 to $29,817,827—in the four years from 1997-98 to 2001-02. And the number of interdisciplinary projects funded within the sciences is rising as well.

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Perhaps the most ambitious curriculum for SDSU science students positions them directly on the business track. In a fledgling program funded by Invitrogen, Pfizer Inc. and Cardiodynamics, three molecular biology Ph.D. candidates are pursuing concurrent M.B.A. degrees. The program is a prologue to no other university nationwide catering to students seeking a research-based doctoral degree combined with solid grounding in business practices.

Science and business

The joint efforts of Dean Gail Naughton in the College of Business Administration and Sanford Bernstein, coordinator of the SDSU/UCSD joint doctoral program, are an innovative way to replicate human tissue, then find financial backing to develop and market the product.

But as chief operating officer of the resulting company, she also discovered rampant discrimination against scientists in the business world. In part because science majors are not traditionally trained to work in teams or to assess the market potential for their discoveries.

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"When it came to making the big decisions," she recalled, "my colleagues would say, "Don't you worry about that, you just worry about the science and the patent." Yet it was clear from their decisions that they didn't understand the product, or how to improve its manufacturing and marketing."

A resolve to master the business side of science led Naughton to UCLA and an executive M.B.A. degree. When she later came to San Diego State, where 95 percent of science graduates head straight into industry, Naughton resolved to offer them better preparation for the real world.

"We realized we were doing our students a particular disservice by not providing them with business training," she said. Naughton sees the new M.B.A. / Ph.D. program in molecular biology as an important step toward addressing that need.

Matt Giacalone, who earned a B.S. in molecular and cell biology at SDSU, enrolled in the joint program as a springboard to starting his own business. Through his entrepreneurship classes, for instance, he's gained "insights into protection of intellectual property, and what we should think about in the lab before we even come up with the application-based research, while his M.B.A. thesis will be a business plan based on his studies."

In the meantime, Giacalone said, he's already realizing benefits of his dual-degree program. Through his entrepreneurship classes, for instance, he's gained new insight into supervising lab students. "Our team is leaping ahead of the others, and I can pinpoint exactly what we're doing right," Giacalone said.

Filling this need are a range of professional science master's programs, designed to deepen scientific knowledge, while introducing collaborative skills like teamwork, problem-solving, workplace ethics and communications.

Late last year, San Diego State received a $185,000 planning grant from the Sloan Foundation to assess demand for an array of professional science master's programs in CSU colleges. The initial grant will gauge both industry need and student/faculty interest in academic curricula encompassing cross-disciplinary fields such as bioinformatics, forensic science and biotechnology.

Masters of science

If there's sufficient demand, said Faramarz Valadz, an SDSU computer science professor who wrote the grant proposal, Sloan is prepared to contribute more than $1 million to help finance 40 new professional science master's programs at 16 CSU campuses. "We are the largest university system in the U.S. " Valadz pointed out. "The Sloan Foundation realized that in one big bang, this could reshape the future of science education at the higher level."

Reshaping science education to a contemporary agenda in which researchers of every ilk collaborate, and academia joins with industry to enhance technological development – this is the era of the universal scientist.

If you would like to learn more about plans for the BioScience Center, please contact Jesse.Brooks@sdsu.edu.

"The shift to a research orientation is evident.”

— Matt Anderson
Colleen Suddeth started to cry two minutes into the Broadway production of "Dreamgirls" and continued weeping throughout the show. A performer since the age of four, she had acquiesced to her parents’ request that she “please not take theatre” at college and was studying business instead. But during this fateful trip to New York, she realized she had to follow her heart.

Flash forward 10 years. Colleen herself appears on Broadway in "Sunset Boulevard," a moment she describes now as an out-of-body experience. “I could hardly take in that something I’d wanted to do since I was a little girl was actually happening,” she says.

This is the world of musical theatre – where dreams come true and stars are born. Where, from the first notes of the overture, the audience is swept into a world exploding with color, motion, drama and song. And it all seems effortless.

But peek behind the curtain, and another story unfolds: performers, directors, designers and choreographers, spending a lifetime in the study and practice of their craft. In their pursuit of excellence, a chosen few, like Colleen, attend San Diego State University’s master of fine arts in musical theatre degree program.

Star scholars

One of only three graduate musical theatre programs in the country, SDSU’s program is dedicated not only to advancing the students’ craft, but also to furthering the field. “One focus on the academic side of the genre is what distinguishes us from the conservatories that concentrate solely on singing, dancing and acting,” explains Paula Kalustian, the program’s director. “We are graduating scholars in the field of musical theatre.”

In fact, three alumni from the class of 2000 have gone on to teach at the college level. One, Jim Brown, joined another Aztec, John Bell, ’88, in the musical theatre program Bell launched at the University of Central Florida in Orlando. By design, the Florida curriculum reflects the collaborative instructional approach of Bell’s own professors at SDSU, including Terry O’Donnell, on the musical theatre faculty since the program’s inception in 1981.

“We’re very sympatico,” says O’Donnell of his interaction with colleagues Rick Simas and Paula Kalustian. “There’s something about the connection of our artistic energies and values that is quite cohesive; it’s a powerful feeling in the classroom.”

All three professors collaborate in the studio class, the heart of the musical theatre curriculum.

Recent Productions:

With ev’ry move that they make, SDSU’s musical theatre students grow as scholars and performers.

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One Singular Sensation

Colleen DeLory

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which emphasizes the synthesis of acting, singing and movement as one exercise. This holistic approach distinguishes San Diego State from conservatories that teach the three disciplines separately. With only eight to 10 applicants accepted into the SDSU M.F.A. program every two years, students intent on honing their on-stage talents receive the kind of individual attention they could otherwise never afford as starting actors. After one year, Alison Betches is already reaping the benefits.

This summer, she got a callback for a new Broadway show—a first despite having lived and auditioned in New York for three years before coming to SDSU. "I got in front of the full production team," Betches says. "It reaffirmed the work I’m doing here at San Diego State. I’m in a good place and will be in a better place in terms of my art and my craft after another year of study."

**History lessons**

On the academic side, SDSU’s curriculum emphasizes the genre’s unique origins. "Musical theatre as we know it is really an American art form," Simas says. "From European operetta and comic opera to turn of the century vaudeville and burlesque, American musical theatre emerged from the New World melting pot."

Students spend considerable time tracing these theatrical roots. "The faculty have a really firm belief that to know where you’re going, you need to know where you came from," says Betches. "We learn the history of musical theatre and choreography and study all the great American composers and lyricists such as Jerome Kern, Rodgers and Hart, the Gershwins and Cole Porter."

Betches and her classmates’ studies are enhanced through access to one of the most impressive archives of musical theatre materials on the West Coast—library, songbooks, sheet music, audio and video recordings—Simas’ own collection. "In musical theatre, many materials are never published or are out of print," he says. "I began collecting from a very young age to preserve this rich heritage."

**In the spotlight**

Students also benefit from real-world opportunities provided by San Diego’s vibrant arts scene. Although New York may be the pinnacle of musical theatre, San Diego boasts two Tony award-winning stages—The Old Globe and La Jolla Playhouse—plus a wide range of smaller venues.

SDSU students have understudied for musical productions at both the Globe and the Playhouse, and have performed in a slew of productions at the San Diego Repertory, Starlight, Moonlight, North Coast Repertory, Lamb’s Players, Diversionary, Sledgehammer and The Theatre in Old Town, where Kalustian is artistic director.

Countless students and alumni have worked there in long-running San Diego favories like "Beehive" and "Forever Plaid." "This theatre’s been a wonderful way to bridge the gap between a university and professional situation," Kalustian says. "We focus on intriguing new pieces or find an interesting way to reconstruct an older piece."

For example, the first musical of the program’s 2003-04 season, "Honk!," was the 2000 Laurence Olivier winner for Best Musical in London, but still isn’t well known in North America. Simas will direct the pop musical, which is based on the famous children’s story, "The Ugly Duckling."

"It’s a family musical with a great moral about diversity, acceptance, tolerance—all the things you want young and old people to think about," Simas says.

**Road shows**

Many other students and graduates have cut their chops on the road with national and international tours such as "Victor Victoria," "The King and I," "Ragtime," "South Pacific" and "Beauty and the Beast." The current class is hoping to travel to Gothenburg, Sweden, in the spring to work on a bilingual, cross-cultural program at GöteborgsOperan, the University of Gothenburg, with the conviction that every generation needs to be exposed to musical theatre from across the globe.

"They love American musicals all around the world," Simas says. "We want to expose our students to the training and opportunities available globally."

Another invaluable travel experience offered by the program is the New York showcase, which enables students in audition for casting directors and agents. To fund these important trips, the program strives to attract grants and private donations.

Maintaining close contact with colleagues in New York and other theatrical centers also helps the faculty remain current with developments in the field. "We produce two musicals a year and consistently steer clear of the old war horses," Kalustian says. "We focus on intriguing new pieces or find an interesting way to reconstruct an older piece."

For example, the first musical of the program’s 2003-04 season, "Honk!," was the 2000 Laurence Olivier winner for Best Musical in London, but still isn’t well known in North America. Simas will direct the pop musical, which is based on the famous children’s story, "The Ugly Duckling."

"It’s a family musical with a great moral about diversity, acceptance, tolerance—all the things you want young and old people to think about," Simas says.

This is the power of musical theatre—to entertain and enrich us with a living portrait of a certain time, place and social order. From the interacational charged New York City of "West Side Story" to the war torn Vietnam of "Miss Saigon," the audience is an active participant in life. Betches hopes to carry on with a distinctive tradition. "When one person can turn around and touch hundreds of people as a teacher and performer, it has a ripple effect," she says. "It’s like ‘pay it forward.’"
So many successful people began here...
Art Linkletter, Ellen Ochoa, Jack Goodall, Sandra McBrayer, Tony Gwynn, Kathleen Kennedy, Ralph Rubio, Norman Brinker—and you. It’s time to come home.

It’s time to create a permanent home for SDSU’s 200,000 alumni. A place that is the cornerstone of the university’s efforts to serve its alumni and the greater San Diego community. A place to reconnect—where we’ll honor the past, celebrate the present and shape the future.

As SDSU strives to maintain its margin of excellence, our need for private donations has never been greater. Now, more than ever, alumni support is essential to honor the legacy of SDSU and build its future. An important way to foster engagement with our alumni is to bring them back to campus. A dedicated Alumni Center will allow us to significantly increase our outreach efforts, enabling us to reconnect with the alumni so vital to SDSU’s long-term success.

The Alumni Center will do more than host alumni—it will serve as a primary point of contact for visitors to our campus, as well as offer spacious meeting and event facilities. The building will be designed with the goal of enhancing our ability to involve our alumni and community in campus-based activities.

A number of naming opportunities exist to establish a legacy in your family name, or that of a loved one. Naming opportunities range from $150,000 for the Grand Hall Foyer to $10,000 for the Donor Honor Wall, and can be paid over a 3-year period. All gifts are tax deductible.

Universities with dedicated alumni centers offer their alumni a place to call home. This will help our Alumni Center in its efforts to secure the private support necessary to continue providing a first-rate education to our students while also being responsive to the needs of our community. But it will only become a reality through the generosity and leadership of alumni and community leaders.

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