



SMU

Dedman College

Dedman means DISCOVERY...

I'm pleased to present the first Dedman College of Humanities and Sciences newsletter of 2009 and to invite you to discover the spirit of innovation that inspires

Dedman's faculty, students and staff. Whether in the classroom, research labs, field studies or administrative offices, a commitment to inquiry and a tradition of teaching excellence have defined Dedman's history.

The 2008-09 academic year offers many examples of this exciting innovation and tradition.

This issue spotlights Dedman College faculty members whose research is finding solutions to major global problems. It focuses on chemistry faculty who are researching new medical treatments for diabetes and on biological sciences research teams who are investigating sleeping sickness and HIV-AIDS. Addressing the declining supply of fossil fuels, professors in the Huffington Department of Earth Sciences are proposing alternative sources of energy.

Dedman's tradition of teaching excellence is seen in recent student successes in the social sciences and the humanities. Two students majoring in political science earned national fellowships

continued on back

Dedman researchers seek answers to global problems

Dedman College professors are working to find solutions to some of the most significant problems that society faces. Searches for new answers to issues including global epidemics, alternative energy, brain health and chronic health problems are under way in Dedman College laboratories and in the field.

Sweet Relief

Two Dedman College scientists are separately working on research to help the world's 150 million adults and children with diabetes.

The work of medical anthropologist **Carolyn Smith-Morris**, associate professor of anthropology, has advanced research to improve diabetes care and prevention on the Gila River Indian Community reservation in Arizona as well as in poor urban neighborhoods in South Dallas. Years of research by Smith-Morris have helped spur development of community-based clinics and home care among the nearly 12,000 Akimel O'odham Indians. In South Dallas, Smith-Morris contributed to the diabetes prevention component of a proposed \$15 million wellness center for Baylor Health Systems.

Brent Sumerlin, assistant professor of chemistry, is assessing the potential uses of nano-scale polymer particles, such as controlled drug delivery. In one scenario, polymers could detect high glucose levels in a diabetic's blood stream and automatically release insulin, freeing diabetics from a daily injection schedule. Hurdles remain to complete the research, but Sumerlin's research earned him a \$475,000 National Science Foundation Faculty Early Career Development Award, considered the most prestigious national recognition for young science faculty members.

Brent Sumerlin



Carolyn Smith-Morris

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The path-breaking research being conducted in Dedman College inspires students working with these and other professors to connect their studies to real-world problem-solving.

—CORDELIA CANDELARIA

Renewable energy

Long before today's global rush to find fossil fuel alternatives, **David Blackwell**, Hamilton Professor of Earth Sciences, and the SMU Geothermal Lab have studied geothermal energy.



David Blackwell

Google recently took notice of Blackwell's reputation as a renowned expert on the vast potential to tap hot rocks beneath the Earth's surface for energy.

The Internet giant awarded \$489,521 to SMU's Geothermal Lab to expand the lab's initial map of North America's untapped geothermal energy resources. Blackwell and Maria Richards, Geothermal Lab coordinator, demonstrated widespread geothermal potential with their Geothermal Map of North America, released in 2004 by the American Association of Petroleum Geologists.

The two, along with earth sciences post-doctoral student Petru Negraru, also sat on an 18-member panel for the Massachusetts Institute of Technology that found geothermal energy could be a major U.S. energy source by 2050.

The Geothermal Lab has a \$200,000 grant from Texas to assess the geothermal resources in the eastern half of Texas. Hot water gushing as a byproduct from oil wells could be harnessed to produce electricity.

Understanding brain aging

New research may identify a drug that can stop the elderly's natural degeneration of neurons – brain cells that govern a person's capacity to talk, feel, think, move and function. Neuron degeneration causes common diseases like Alzheimer's, Parkinson's and amyotrophic lateral sclerosis (ALS).

Ed Biehl, professor and chair of chemistry, is working on brain aging research with biologist Santosh R. D'Mello at the University of Texas at Dallas. After testing 45 chemical compounds, they identified four with the potential to stop the slow death of neurons. The newly identified compounds, which have been tested in cultured neurons and mice, are nontoxic and may be suitable for human testing. Current medications only alleviate symptoms.

"We are doing further work, but can disclose only that several of the new compounds appear to have better neuro-protection than the four," Biehl says. "It is the most exciting research I have been engaged in at SMU."



Ed Biehl

Global health

Dedman College researchers are searching for answers about two diseases the World Health Organization (WHO) defines as Category I or "out of control." Worldwide, WHO estimates that more than 33 million people are living with HIV-AIDS, while in Sub-Sahara Africa 300,000 to 500,000 people are suffering from sleeping sickness – an often fatal disease caused by a parasite transmitted in the bite of a tsetse fly.

Robert Harrod, associate professor of biological sciences, is finding ways to inhibit virus production in helper T-cells infected with multidrug-resistant HIV-AIDS. Harrod and fellow researchers have identified an enzyme that functions as an essential cofactor for HIV-1 replication. Inhibition of this enzyme blocked virus production in HIV-infected cultures in vitro, carrying important implications for the development of antiretroviral therapies against drug-resistant HIV-AIDS. His work has been published in *The Journal of Biological*



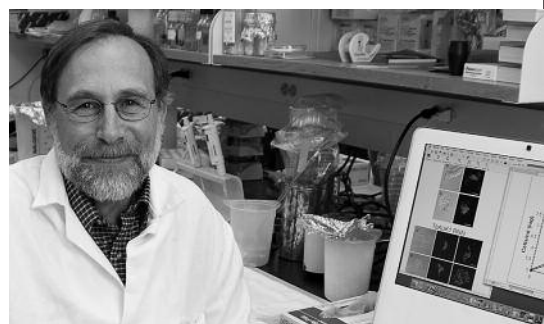
Robert Harrod

Chemistry, Molecular and Cellular Biology and Oncogene and is supported by the Department of Health and Human Services–Health Resources Service Administration.

Decoding the genome of the *Trypanosome* parasite has led to new avenues of research for **Larry Ruben**, professor of biological sciences, who has spent his 26-year career studying *Trypanosome*, the parasite that causes sleeping sickness. His most recent work focuses on proteins required for late stages of cell division. Better understanding of these proteins could lead to development of new drugs to treat sleeping sickness.

"This new research can take advantage of cancer drugs directed against the cell cycle," Ruben says. "Sleeping sickness affects the poorest populations in Africa who are unable to pay for expensive therapies. The ability to piggy-back onto therapies already being developed for other purposes is a huge advantage."

The path-breaking research being conducted in Dedman College inspires students working with these and other professors to connect their studies to real world problem-solving, says Cordelia Candelaria, dean of Dedman College. "Learning from leading researchers produces learners and problem-solvers for the future."



Larry Ruben

Young researchers pursue Big iDeas

Five low-income Dallas families signed up last summer for Health 'n' Motion, a nutrition and fitness program developed by a team of SMU undergraduate students in partnership with a Dallas YMCA.

“Our project is unique because it emphasizes parents and kids making small, healthy lifestyle changes as a family.”

—BAHAR RAVANDI '08



Teaching children to choose healthy snacks like peanut butter on apple slices is part of a nutrition and fitness program developed by undergraduate students for low-income Dallas families.

After six weeks of diet discussions and workout sessions, most of the families were exercising together regularly. Some had traded soda and fast food for water and home cooking. Several moms and dads lost weight, and all of the families reported a greater awareness of food choices and exercise.

“Our project is unique because it emphasizes parents and kids making small, healthy lifestyle changes as a family,” says Bahar Ravandi '08, who graduated with degrees in biology and Spanish.

Ravandi and five teammates created Health 'n' Motion through Big iDeas, an undergraduate research program launched last year by the Provost's Office to address key Dallas issues.

Their group was selected as one of eight interdisciplinary teams awarded \$5,000 stipends for their projects, which ranged from mass transit to business development. All of the teams reported on their progress at a September symposium.

In February, 10 new teams were awarded Big iDeas grants for 2009-10. Their proposals include an analysis of geothermal energy resources below campus and an after-school arts program for at-risk students.

“Big iDeas fits very well with our goal to build bridges between SMU and the community,” Provost Paul Ludden says. “It is important for Dallas to see SMU as an intellectual resource and for SMU to see Dallas as its home base.”

“Having these opportunities is so important in developing students' interests and career paths,” Ludden says. “Dallas also will receive a fresh perspective in solving its problems.”

Health 'n' Motion team member Kym Gonzalez '08, who earned a Bachelor's in business and is attending Southwestern Medical School, says her team came up with their Big iDea during a cultural formations course. “Social Class and Democracy” is taught by Bruce Levy, director of Dedman College's Center for Academic-Community Engagement. The project revealed the barriers families face when it comes to health – such as neighborhood safety, fatty school lunches and lack of time, Gonzalez says.

The students also learned that they could make an impact, she says, when they saw parents and children having fun together at the gym. “We'd like to see our program continue and grow,” she says.

“It has big potential.”

Learn more at smu.edu/bigideas.



Environmental studies students tour the McCommas Bluff Landfill Gas Plant, which captures methane gas from the landfill then cleans it to sell as pipeline quality gas.

DEDMAN OFFERS NEW MAJOR AND MINOR

SMU students who desire to lead by solving environmental or human rights challenges now have two more options in Dedman College – the Bachelor of arts in environmental studies and the minor in human rights.

In addition to the Bachelor of science in environmental science, the new degree in environmental studies prepares students for careers in government or educational organizations, public policy, business and related fields, says Bonnie Jacobs, associate professor in the Roy M. Huffington Department of Earth Sciences and director of the program.

Coursework ranges from the natural and social sciences to business and engineering. Six students so far have declared the environmental studies major, which was approved for enrollment beginning in fall 2008.

The new human rights minor, rare in the United States, will have about two dozen graduates by the end of the 2009 spring term, says Rick Halperin, director of the human rights education program. More than 100 students are working on the 18-hour, interdisciplinary minor.

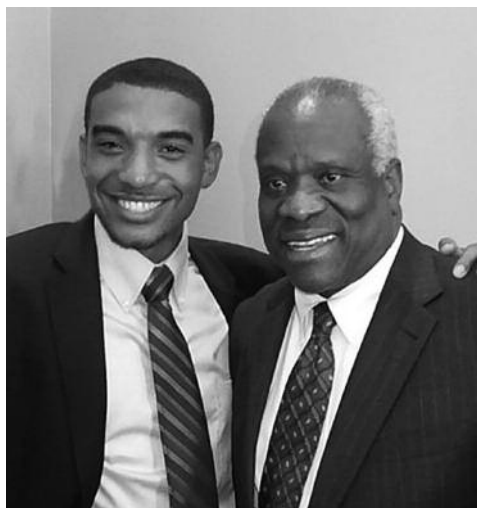
“I saw a real yearning for this material on this campus. Many of our young people want to work for a better world,” Halperin says. “Whether they are going to law school, or into business, sports, the arts or theology – everything in this world is linked to human rights.”

Halperin has taught a human rights course at SMU for nearly 20 years, but it was a \$1 million gift from the Dallas-based Embrey Family Foundation that launched the human rights minor.

From Africa to Washington, student researchers take top honors

Learning leadership in the nation's capital

Junior **Warren Seay** spent summer 2008 in Washington, D.C, where he took political science courses at Georgetown University, interned with the Department of Labor and met political leaders including former Secretary of State Colin Powell.



Junior political science major **Warren Seay** met leaders including **Clarence Thomas**, associate justice of the U.S. Supreme Court, as one of 24 students nationwide accepted into *The Institute for Responsible Citizenship's Washington Program*.

"What an eye-opening experience," says Seay, a Hunt Leadership Scholar majoring in political science and one of 24 students nationwide accepted into *The Institute for Responsible Citizenship's Washington Program*. "This program gives minority men a unique perspective on social problems and how we can create change through leadership."

For his internship with the Department of Labor's Office of Federal Contract Compliance Programs, Seay says he drew on his statistics and civil rights courses at Dedman College. His work on pay disparity guidelines will be published in the *Federal Registrar*.

Seay, who serves as president of Omega Psi Phi fraternity at SMU, will return to the nation's capital this summer for the second portion of the leadership program and plans to apply for internships with the White House, think tanks and consulting firms. "I'm learning how to get things done in government step by step – and to never underestimate the power of networking," he says.



Medieval studies graduate **Ali Asgar Alibhai '08** received a *Fulbright Scholarship* to study art and architecture in Morocco.

From sacred sound to holy light

Ali Asgar Alibhai '08, who earned a Master's degree in medieval studies from Dedman College, is traveling to Morocco this summer on a prestigious Fulbright Scholarship to study art and architectural history.

In Morocco, Alibhai plans to examine and catalog the few surviving "bell-lamps" – bells that Muslims captured from churches in Europe during the Middle Ages and transformed into lamps for mosques, where they hang today.

By studying "the transformation of one culture's sacred object of sound into another culture's sacred object of light, I hope to learn more about how Christians and Muslims interacted in medieval Spain," says Alibhai, now a student in Harvard University's Ph.D. program in Near Eastern Languages and Civilizations.

Alibhai was introduced to mosque lamps during his graduate studies at SMU. "The medieval studies program offered an unbounded path of study including everything from Byzantine to Islamic to the European Middle Ages," he says.



LUNCH, LEARN AND TRAVEL WITH GODBEY LECTURE SERIES

Piecing together history in Peru

Last year **Amanda Aland**, a Dedman College graduate student in archaeology, spent several months excavating a site on the northern coast of Peru with the support of a National Science Foundation grant. In the rocky Chao Valley, former home to the Chimú empire, she and her team unearthed centuries-old ceramics, animal matter and human remains.

She also found evidence of the mighty Incas, who conquered the provincial regions in 1470. “We found pottery and architecture that shows Incan influences,” she says.

This spring Aland returns to the site, called Santa Rita B, to continue her work—this time as a Fulbright Scholar. The U.S. State Department scholarship supports 10 months of library research, field work and laboratory analysis.

“We want to piece together how the two empires interacted,” she says. “Did they go to war, or make peace living under new rules? We always can learn from the past.”



Archaeology graduate student Amanda Aland will travel to Peru as the recipient of a Fulbright Scholarship to explore the 15th-century interaction between the Incas and the Chimú empire.

Dedman College's Godbey Lecture Series introduces the Dallas community to many of SMU's faculty members at a series of lunchtime and evening programs, local day trips and longer tours. Spring and summer programs range from politics to art.

May 5 **Secular Happiness** with Willard Spiegelman, Duwain E. Hughes Jr. Distinguished Professor of English

June 4 **Close Encounters of the Wild Kind** with Louis Jacobs, professor of Earth sciences

June 8, 9 **African American Literature: Looking Back, Looking Forward** with Darryl Dickson-Carr, associate professor of English

June 16, 23 **Diego Rivera: The Cubist Portraits, 1913-1917** with Mark Roglán, director of Meadows Museum

July 7, 14, 21, 28 **Fiction's Fundamentals: Character and Circumstance** with Vicki Hill, director of Altshuler Learning Enhancement Center

July 23 **Discovering Sacred Traditions** with Robert A. Hunt, director of global theological education, Perkins School of Theology

October 9-19 **National Geographic Expedition of the Galapagos Islands** with Louis Jacobs, professor of Earth sciences

To register and learn more visit smu.edu/godbey.

EXAMINING THE POWER OF THE PRESIDENCY: SENIOR PRESENTS RESEARCH IN WASHINGTON

Senior **Rachael Morgan**, a political science and journalism major, is one of 85 students across the country awarded a yearlong fellowship with the Center for the Study of the Presidency in Washington, D.C.

She is studying the expansion of executive power during the modern presidency using Executive Order 13233 on presidential documents as a case study. “The president must walk the fine line between protecting the country and protecting rights of American citizens,” says Morgan, who is also the Edwin L. Cox Undergraduate Research Fellow at the John Goodwin Tower Center for Political Studies at Dedman College.

As part of the Washington fellowship, Morgan attended a workshop this fall with government officials and public policy experts, and was partnered with a scholar of unitary executive theory. She returns to Washington this spring to present her findings. “It’s been a great opportunity not only to conduct original research with leaders in the field, but also to meet people my age who are passionate about politics,” she says.

After graduation Morgan plans to attend law school, but first she will spend two years teaching underprivileged children as a volunteer for Teach for America.



Senior political science and journalism major Rachael Morgan travels to Washington, D.C., this spring to present her original research on the expansion of executive power in the U.S. presidency. She is one of 85 students nationwide to receive a yearlong fellowship with the Center for the Study of the Presidency.

Spotlight: Pierce Allman looks to the future of Dedman College

Pierce Allman's '54 influence at SMU began during his days as a student in the 1950s and continues today in his role as chair of the Dedman College Executive Board. Allman followed a family legacy by attending SMU, the alma mater of his mother, brother and sister. The recipient of a *Dallas Morning News* scholarship, he studied broadcast and film. In his spare time, he was head cheerleader. Allman received one of SMU's highest honors, the M award, upon graduation.

Allman left his position as director of production and programming at WFAA radio to come back to SMU to direct alumni affairs during the University's 50th anniversary celebration. During that time he penned the words to one of SMU's fight songs, "SMU Loyalty Song."

Today, Allman leads the 34-member Dedman College Executive Board, which serves as an advisory panel to Dedman College administration. In a recent interview Allman shared his thoughts about Dedman College.

What is important about Dedman College to SMU and to Dallas?

Dedman College is the core of SMU, strategically positioned in time and place to provide Dallas with thoughtful, innovative leadership. Dallas is changing rapidly and dramatically – from a city defined by a central business district with locally owned financial institutions – to a multi-county metropolis. As Dallas struggles to become an international city and at the same time reclaim its lore, nagging issues are confronted daily, such as quality of life, competitiveness and education. Any modern metropolis striving for relevance needs effective municipal schools as well as a first-rate university, respected and supported for its teaching, research and resources.

Dedman College is the core of SMU, strategically positioned in time and place to provide Dallas with thoughtful, innovative leadership.



*Chair of Dedman College Executive Board
Pierce Allman*

What do you see as the strengths of Dedman College?

Dedman College is aggressively seeking and securing first rate talent in faculty positions. It offers a variety of programs – more than 50 baccalaureate programs, 50 minors, 18 Master's degree programs and 12 doctoral

programs – with more on the way. Dedman College keeps alumni and the public challenged and engaged through community outreach such as lectures, symposia and seminars.

How could Dedman College improve?

Sometimes by training and tradition, departments tend to concentrate on their own disciplines and people, inadvertently neglecting measurable achievements of the college as a whole. We are entering a new century, which offers a time to adapt the framework of talent and resources to a creative coalition to accomplish agreed priorities. At the same time, we can continue to strengthen departmental programs so synergy produces the desired excellence.

As chair of the Dedman College Executive Board, what would you like alumni to remember about Dedman College?

Dedman College is the oldest and largest academic unit at SMU with 250 full time faculty in 16 departments encompassing the humanities, social science, natural and mathematical disciplines – the basics of higher education.

A LECTURE TO REMEMBER



Thirty students in a Dedman College political science class received a surprise visit in February from former President George W. Bush. He spent about one hour answering students' questions in the "American Political System" class taught by Harold Stanley, the Geurin-Pettus Professor of American politics and political economy.

Lessons in change: *Estudiantes de Dedman hacen historia iglesiera*

More than 400 parishioners packed into the community room of St. Edward Catholic Church in East Dallas in December waiting to hear the results of more than 200 hours of research by SMU undergraduates.

Students in the religious studies course “Latino/Latina Religions” spent four months interviewing church leaders and parishioners and searching microfilm newspapers and records to prepare a 75-page history of the 106-year-old parish.

First in Spanish, then in English, the students presented the parishioners with the story of their church.

“This area was once home to European immigrants from Germany, Italy and Ireland,” says class member Julia Davila, senior psychology major. “Rudolph’s Market and Sausage Factory, a European-style butcher, is still in business nearby.”

Now the church serves a Latino immigrant population, offering 10 of its 11 Sunday services in Spanish.

Students analyzed the church’s transition and adaptation to its changing neighborhood in the project created by Jill DeTemple, assistant professor of religious studies. Course requirements included 15 hours of community service to a religious organization working with Latinos, but most students put in many more hours, visiting services and sharing refreshments at a festival that takes place at the church every Sunday afternoon.

“I liked the idea because I could include the entire class in one project, and combine academic skills such as primary-source research with applied learning in the community,” DeTemple says. “Working with the parish allowed students to challenge authors or ideas I was presenting by holding them up against what they were experiencing at St. Edward. I also think that they gained valuable experience in organizing and executing a large project that required group work, and in the case of the presentation to the parish, a polished presentation in two languages.”

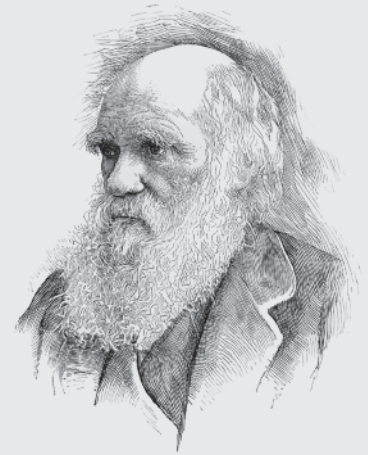
A young adult group at the church plans to build upon the project with more research, says St. Edward Deacon Dave Obergfell. “The completed project is wonderful, we’ll use it as a building block for lots of things.”

For the SMU students, the project became a teaching tool that stretched their boundaries and their schedules.

“Our group spent about 80 hours on our part of the project,” Davila says. “The project took me out of my comfort zone, but it gave me a sense of perspective. The church is thriving. The members of St. Edward made us feel like we belonged.”



Students in the religious studies course “Latino/Latina Religions” prepared a 75-page history of St. Edward Catholic Church, tracing its transition and adaptation to patterns of immigration in East Dallas.



CELEBRATING CHARLES DARWIN'S 200TH BIRTHDAY

Christina Paulson, a graduate biology student, uses Charles Darwin’s theories in the laboratory every day as she conducts preliminary drug screening on worms.

“The majority of biology labs conduct research based on Darwin’s concept that all living organisms are related, hence studying one animal could elucidate information about another,” she says. “Potential drugs can be tested on a population of worms to see if they have the desired effect before testing the medication on humans. These worms have been used to make significant advances in diabetes, obesity, cancer, Alzheimer’s disease and Parkinson’s disease,” she says.

Paulson shared her thoughts on Darwin’s birthday, February 12, at a campus event celebrating Darwin’s contributions.

“It’s hard to imagine any branch of science that has not been advanced by Charles Darwin’s work,” says Paul Ludden, SMU provost and vice president for academic affairs. “As the evolution of SMU continues into its second century, it is fitting to recognize the intellectual achievement found in Darwin’s writings.”

Dedman College has hosted renowned biologists, anthropologists and psychologists as part of a lecture series commemorating Darwin’s birth. Upcoming events include a September half-day symposium featuring Dedman College faculty members and an October Godbey Lecture Series trip to the Galapagos Islands led by paleontologist Louis Jacobs, professor of earth sciences.

For more information about Darwin events visit smu.edu/smunews/Darwin.

to study in Washington, D.C. Closer to home, undergraduates in a religious studies class researched the history of a 105-year-old Dallas church and found patterns of immigration that have shaped the dynamic profile of North Texas' largest city.

Dedman College also is changing. To equip students for a rapidly changing future, a new major in environmental science and a minor in human rights represent the college's response in two critically important areas. Finally, we're developing Dedman College East in SMU's Expressway Tower at Yale and Central Expressway to house research working groups, as well as Dedman's first public information and community engagement team.

Every page of this newsletter offers a glimpse of what this new dean of SMU's oldest and largest college encounters every day: The delight of working amidst the intellectual energy and problem-solving creativity that is Dedman College.



Left: Provost Paul Ludden, Associate Professor of Economics Thomas Osang, former SMU Trustee Jeanne Tower Cox '78, Berry Cox, Dedman College Dean Cordelia Candelaria, Professor of Political Science James Hollifield at a Dedman College Faculty Research Spotlight hosted by Jeanne and Berry Cox.



Below: Barbara Hunt Crow (left) hosted a Faculty Research Spotlight on discussing the politics of the 2008 presidential election. Guests included Dedman College Dean Cordelia Candelaria (right).

Cordelia Candelaria
Dean of Dedman College and
University Distinguished Professor



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