

# STATE

The Faculty-Staff Bulletin of The Florida State University

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## Landmark study unlocks stem cell, DNA secrets to speed therapies

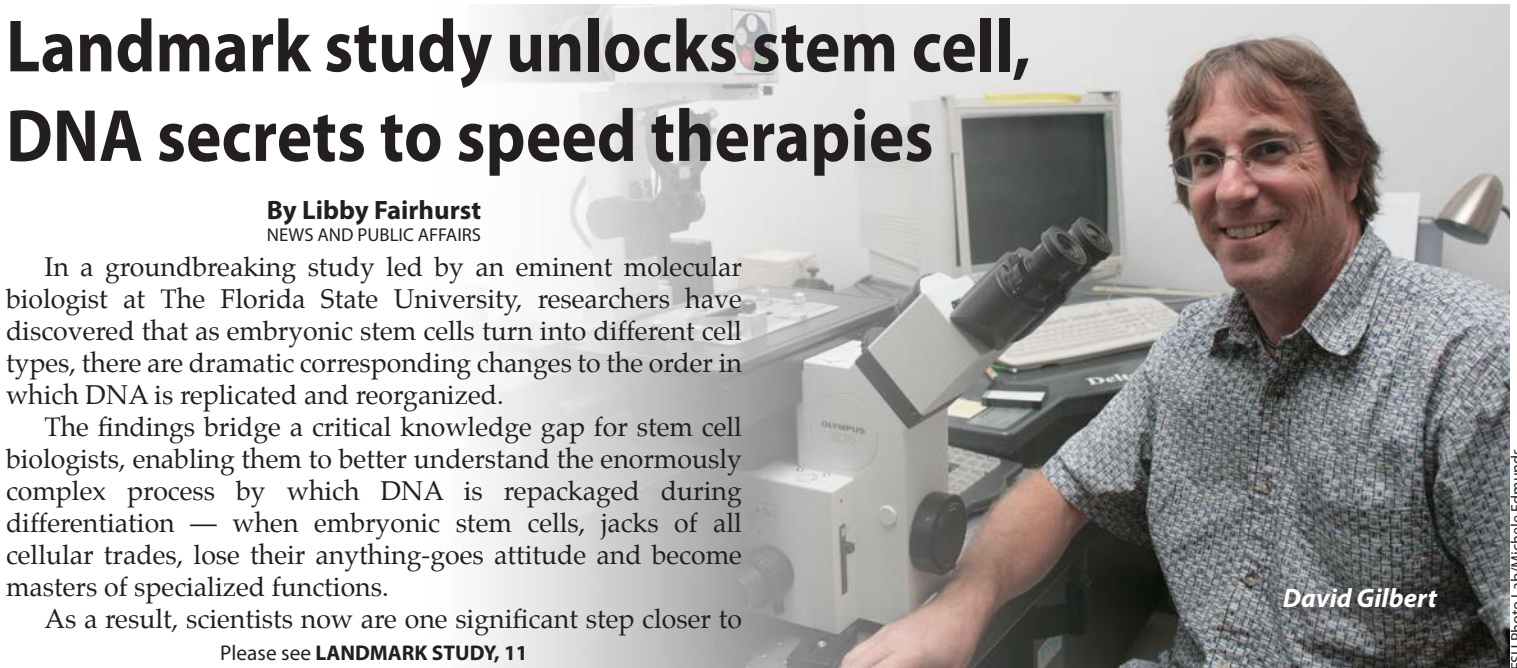
By **Libby Fairhurst**  
NEWS AND PUBLIC AFFAIRS

In a groundbreaking study led by an eminent molecular biologist at The Florida State University, researchers have discovered that as embryonic stem cells turn into different cell types, there are dramatic corresponding changes to the order in which DNA is replicated and reorganized.

The findings bridge a critical knowledge gap for stem cell biologists, enabling them to better understand the enormously complex process by which DNA is repackaged during differentiation — when embryonic stem cells, jacks of all cellular trades, lose their anything-goes attitude and become masters of specialized functions.

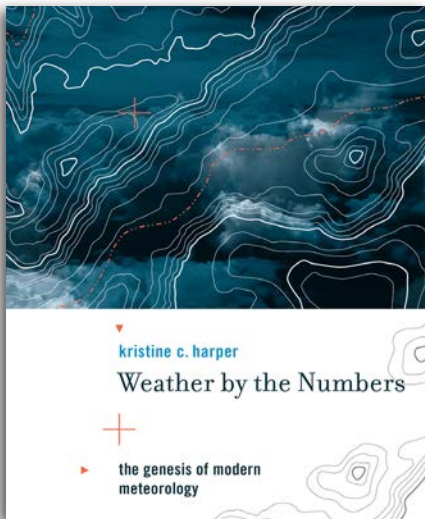
As a result, scientists now are one significant step closer to

Please see **LANDMARK STUDY, 11**



FSU Photo Lab/Michele Edmunds

## From cloudy to clear: Book explores history of meteorology



For much of the first half of the 20th century, meteorology was more art than science, relying heavily on an individual forecaster's lifetime of local experience. Now, a Florida State University researcher has written a book that tells the story of the field's transformation from a "guessing science" into a sophisticated scientific discipline based on physics and mathematics.

"Weather by the Numbers: The Genesis of Modern Meteorology" was written by Kristine Harper, an assistant professor of history at FSU, and was just published by the MIT Press. In her book, Harper says that the greatest

factor making the transformation of meteorology possible was the development of the electronic digital computer. Earlier attempts at numerical weather prediction had foundered on the human inability to solve nonlinear equations quickly enough for timely forecasting.

"A weather forecast is of little use if it is made several weeks after the weather has come and gone," Harper noted.

After World War II, the combination of an expanded observation network developed for military purposes, newly trained meteorologists savvy about math

Please see **WEATHER, 11**

## SPREAD theWORD

At The Florida State University, conducting research isn't just for graduate students anymore. More than 3,000 undergraduate students and faculty members are working together on research projects.

# *Achieving Financial Balance in an Unbalanced Economy*

## Free Report Available

Confusion and chaos are rampant in the financial marketplace. Just look at the headlines regarding the government bailout, the subprime mess, real estate values, the stock market now plummeting, interest rates, and worries about inflation. Add to this all the rhetoric being presented by both political parties, no wonder people are paralyzed and afraid to make financial decisions. Can you blame them?

I think it's important to understand what got us where we are. Most people are simply out of balance, financially speaking. We've become a nation of spenders. We have too much debt, both mortgage and credit card debt. We've forgotten how to save money.

When working with my clients, I use a program called The Living Balance Sheet®. We focus on **four financial domains: Protection, Assets, Liabilities, and Cash Flow.**

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**Liabilities:** here we work on eliminating debt, reducing taxes, and mortgage selection. Many people are in trouble today because they chose the wrong type of mortgage.

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I find it interesting that all of a sudden the financial press is telling us to be more conservative, save money and spend less. By using The Living Balance Sheet®, we always suggest that our clients do these things and to be prepared for Life's Unplanned and Untimely Events.

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John Curry earned his Master of Science in Financial Services and has authored several articles and special reports. He is a Senior Associate of the North Florida Financial Corporation. John has assisted thousands of people in planning for a Secure Retirement through his retirement workshops, speaking engagements, DVD's and CD's, and personal consultations. John may be contacted by calling (850) 562-3000, e-mailing [john.curry@glic.com](mailto:john.curry@glic.com), or visiting his website [www.JohnHCurry.com](http://www.JohnHCurry.com).



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The deadline for the  
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FLORIDA STATE  
UNIVERSITY

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People with disabilities who require special accommodation for any event listed in *State* should call the unit sponsoring the event, or for the hearing or speech impaired, use the Florida Relay Service at 1-800-955-8770 (voice) or 1-800-955-8771 (TDD). Requests for accommodations must be received at least five working days before the event. To receive *State* in an alternative format, call the FSU Student Disability Resource Center at (850) 644-9566.

## Year-end dates for processing charitable gifts to FSU

University employees who are responsible for processing or receiving gifts for their colleges or departments, take note: the Florida State University Foundation will have abbreviated business hours during the winter break.

To ensure donors' year-end gifts reach the Foundation in a timely manner and are processed according to their wishes, the Foundation encourages employees to adhere to the following revised schedule.

The Foundation office will close at 2 p.m. on Wednesday, Dec. 24, and will remain closed through Monday, Dec. 29. The Foundation will be open from 8 a.m. to 5 p.m. on Tuesday, Dec. 30, and Wednesday, Dec. 31, to assist with year-end contributions and to process gifts.

Documents and donor instructions either

can be mailed using campus mail code 2739 or hand-delivered to the Foundation office at 2010 Levy Ave., Building B, Suite 300.

After the holidays, employees should take a few moments to sort through their mail in order to identify charitable items and then deliver them, along with their respective envelopes, to the Foundation office by Friday, Jan. 9, 2009.

"We want to make all Florida State employees who receive year-end gifts aware of the urgency of transmitting those gifts and any donor instructions to us," said Brianne Adachi of the Foundation's Gift Processing Services.

For more information, send an e-mail to Adachi at [badachi@foundation.fsu.edu](mailto:badachi@foundation.fsu.edu), or call (850) 644-0770.

## The College of Business shows its heart



Dozens of Florida State University College of Business faculty, staff members and students participated in the "2008 Big Bend Start! Heart Walk," a benefit for the American Heart Association on Oct. 18 at Tom Brown Park in Tallahassee. The college's team raised more than \$10,000 — nearly half of the \$25,000 raised by all participating FSU employees. The annual event promotes awareness and prevention of the causes of heart disease.

## NewsMakers

**"The impacts of climate change on Florida's coasts and on our economy will be substantial, persistent and long-term, even under our conservative estimates."**

Julie Harrington, director of The Florida State University Center for Economic Forecasting and Analysis, as quoted by United Press International discussing the likely dour implications of global warming for the state of Florida over the 21st century. Harrington also was quoted by *ScienceDaily* and *The Money Times*.

**Florida State makes headlines around the world: [www.fsu.edu/~unicomm/news](http://www.fsu.edu/~unicomm/news)**

The  
**BIG**  
Story

# 'An impressive job'

*T.K. Wetherell gives the Annual Report of the President on the State of the University in the auditorium of the John Thrasher Building, home of the College of Medicine, Oct. 31.*



FSU Photo Lab/Bill Lax

## Wetherell lauds commitment of faculty and staff members during annual address

By **Jeffery Seay**  
EDITOR IN CHIEF

Under a pall of financial adversity, the Florida State University faculty continues to perform "impressive work" and defy conventional wisdom by doing more with less, according to President T.K. Wetherell.

"The quality of this institution hasn't suffered as you might think it would

have," Wetherell said during the Annual Report of the President on the State of the University at the Fall Meeting of the General Faculty on Oct. 31. Florida State will most likely begin the 2009-2010 academic year with \$50 million to \$70 million less than it had at the beginning of 2007-2008.

In his address, Wetherell presented a list of accomplishments that served as evidence of the indefatigable drive of Florida State employees to improve the institution, including its 70 percent general-student graduation rate and its 90 percent student-retention rate, one of the highest in Florida.

"Twelve percent of our students are black, but they graduate at a higher rate than our other students — at 72 percent," Wetherell said. "This rate is one of the highest in the nation among public graduate-research institutions and historically black institutions."

Over the past five years, enrollment has increased by 32 percent. In that time, Florida State has admitted 70,000 high school students and 12,000 transfer students. It has graduated 33,000 baccalaureate, 8,600 master's and 1,500 doctoral degree holders — a 23 percent increase.

"This represents impressive work from the faculty," he said. "Clearly, our faculty and staff hasn't sat around saying 'We can't do it,' but 'How can we do it?'"

He went on to praise the College of Motion Picture, Television and Recording Arts as the best in the nation and the College of Law as the best in the state.

"Dean Frank Patterson is one of the top 12 most influential people in Hollywood (Calif.), and he lives right here in Tallahassee," Wetherell said. "If passing The Florida Bar exam is any indication of quality, then we're the best because our students consistently pass at a higher



rate than all the rest.”

The university’s federal research-grant awards have topped \$199 million, reported Wetherell — a 17 percent increase.

“More importantly, our patent applications are up 93 percent,” he said. “Our faculty is doing an outstanding job on research.

“When you look at the facts and figures, I believe our faculty and staff has done as outstanding a job as any group.”

Despite tough economic times, Wetherell emphasized that the university’s Board of Trustees, the administration and the faculty would continue to work together to solve problems, financial or otherwise. To that end, he laid out five issues that the university will concentrate on in the coming months and years.

#### **Fiscal health**

The No. 1 priority for Florida State is to protect access, affordability and quality. Across-the-board budget cuts would not be considered, Wetherell said.

“We cannot maintain quality by taking a little bit from everybody and reducing the institution to mediocrity,” he said.

Wetherell has instructed Provost and Executive Vice President for Academic Affairs Lawrence G. Abele to head a Crisis Budget Committee, composed of the vice presidents, three faculty members,

two staff members and the president of the student body.

“We will begin to look at opportunities to decrease the budget but increase flexibility,” Wetherell said. “We will manage this economic crisis rather than have the crisis manage us.”

What’s more, Wetherell is proposing legislation, known as “Stand Up for Our Students,” that would offset budget cuts by giving Florida State and the University of Florida the ability to implement an emergency tuition increase.

“Those dollars will go toward ensuring we have high-quality faculty and classes for our students,” he said.

Even when implemented, the increase would not raise in-state tuition from its status as the nation’s cheapest.

“My grandson’s tuition for kindergarten is twice as high as that of Florida State students,” he joked. “That is affordability, if there ever was.”

Kidding aside, Wetherell said that the university had gone above and beyond legislative requirements in spring 2008 by putting \$20 million into a need-based financial aid program.

#### **Governance system**

Florida State will promote improvements to the state’s higher-education governance system by encouraging the Board of Governors to act as a policy-making, not procedural, body. What’s more, Wetherell intends to lobby the leg-

islature to reconsider making the state commissioner of Education an elected office.

#### **Students**

The university will continue its focus on students by providing an education in a nurturing environment.

“In surveys, our students tell us that they are getting an outstanding education from an outstanding faculty, and that they enjoy interacting with the faculty,” Wetherell said.

#### **Private funding**

Over the coming years, the raising of private funds will continue to be at the forefront of Florida State’s agenda.

Since the December 2005 conclusion of the FSU Connect capital campaign, which raised \$617 million, the Foundation has raised an additional \$300 million.

“The Foundation is having one of its best years ever,” Wetherell said.

He complimented the Foundation’s staff for the critical work it does to increase the ability of the university to carry out its mission.

#### **Bridge building**

A strong city of Tallahassee benefits Florida State as much as a strong Florida State benefits Tallahassee. Wetherell emphasized the importance of strengthening the so-called “town and gown” relationship between city and university, and nurturing a spirit of cooperation.



FSU Photo Lab/Bill Lax

## **2008 Torch Awards**

During the 2008 Fall Meeting of the General Faculty, the Florida State University Faculty Senate honored three people with Torch Awards for their distinguished contributions to the university. Betty Lou Joanos (B.S. '57, Ph.D. '85), left, received a Mores Torch Award for her service as a former faculty member and associate director of the FSU Alumni Association. JoAnn Blackwell, center, received a Mores Torch Award in recognition of her university career that began in 1965 as a bookkeeper and receptionist in the College of Education, and concluded as executive assistant to FSU President Emeritus Talbot “Sandy” D’Alemberte. Clifford R. Hinkle (B.S. '71), right, received a Vires Torch Award for his current service on the FSU Foundation Board of Trustees, his decade of past service as a director of the FSU Research Foundation, and his past service on the board of the Seminole Boosters.

# Music-Play Project fosters 'response-ability' in children with autism

By Libby Fairhurst  
NEWS AND PUBLIC AFFAIRS

In a room dubbed the E-WoMP (exploratory world-music playground) that serves as the centerpiece of the Music-Play Project housed at Florida State University's College of Music, children with autism spectrum disorders (ASD) are making impressive gains in creativity, emotional regulation and social participation.

FSU ethnomusicologist Michael B. Bakan likes to call such gains "response-ability." He's the director of the innovative medical ethnomusicology program, which uses an array of unusual musical instruments from around the world for improvisational music-play activities that help create a unique therapeutic environment.

"Our program emphasizes ability and personhood over disability and 'treatment' and accepts that there are different ways of interacting, just as there are different ways of making music in different cultures," said Bakan, an associate professor in the College of Music. "The Music-Play Project fosters the growth of response-ability, and in turn, happiness, because it gives children the chance to contribute to the co-creation of culture who too often are characterized as being incapable of doing so."

Bakan and FSU colleague Benjamin Koen, an assistant professor of ethnomusicology, developed, launched and now oversee the interdisciplinary project in collaboration with researchers at the university's Center for Autism and Related Disabilities and College of Medicine.

The Music-Play Project welcomes children three at a time to the E-WoMP, where they can choose from among safety-modified world-music options such as Balinese gamelan instruments, a West Javanese angklung (tuned bamboo-tubes rattle), and a West African gyil (xylophone), among many others. Less exotic choices might include homemade shakers, small cymbals and slide-whistles. Soft, colorful rubber swimming-pool



FSU Photo Lab/Ryvalls Lee

Michael B. Bakan, director of the Music-Play Project for children with autism spectrum disorders, sits among instruments in the "E-WoMP" (exploratory world-music playground).

dive sticks are used as mallets. Bakan describes all the instruments as "high yield for low input" because they yield satisfying sounds with minimal effort and require little or no technical competence.

Children can freely explore the creative and social possibilities in the E-WoMP on their own terms or with one another, the parent accompanying them, or Bakan and Koen, who as expert improvisers trained in diverse world music traditions, serve as music-play facilitators.

"By supporting a child's expression and creativity, following instead of leading, responding rather than directing, and integrating instead of teaching, our approach helps children on the autism spectrum in ways that more directive, skills development-based interventions, music-related or otherwise, may not," Bakan said.

## Need student labor? Try the Student Employment Program

The Career Center wants to remind faculty members to use its free Student Employment Program job board — also known as the "SeminoleLink" — to post part-time departmental job opportunities for students. The Student Employment Program was developed by Florida State University's Student Government Association, the FSU Office of Financial Aid and The Career Center to connect students and part-time employers, whether they are faculty members, academic departments or off-campus businesses. The Career Center's goal for the program is to give students a one-stop database to find job opportunities, while also giving employers a larger pool of candidates to choose from.

One benefit to faculty members of the Student Employment Program job board is that they can specify the type of major they are seeking for a given position, according to Jamie Decker, a graduate assistant at The Career Center who coordinates the

program. Another benefit is in the advertising of jobs to a wider audience. The Student Employment Program job board is a way to supplement job postings on individual departmental Web sites.

"Faculty members may have part-time positions within their departments that the majority of appropriate student candidates are unaware of," Decker said. "Many students think of The Career Center as their primary clearinghouse for job opportunities. Therefore, they might not even go to a departmental Web site to look for job opportunities."

To sign up with the Student Employment Program, employers (faculty members or departments) should visit [www.career.fsu.edu](http://www.career.fsu.edu), and click on "SeminoleLink." They should log in under the employer link, and follow the sign-up directions accordingly. If there are problems with the sign-up process, call Decker at 645-6516, or send an e-mail to [SEP@admin.fsu.edu](mailto:SEP@admin.fsu.edu).



>>**Get a grip on your undergrads:** Florida State University ethnomusicology Assistant Professor Frank Gunderson will discuss “Strategies for Effective Seminars with Undergraduates” on Thursday, Nov. 20, at 3:30 p.m. in the Starry Conference Room of the Rovetta Business Building. The talk, which is sponsored by Academic and Professional Program Services: Center for Teaching and Learning, is part of the Teaching Excellence speaker series. To learn more or to register, visit <http://ctl.fsu.edu>.

>>**Discount roundball:** Florida State employees can take advantage of a special, cut-rate ticket price for the Monday, Nov. 24, men’s basketball game against Western Illinois at the Donald L. Tucker Tallahassee-Leon County Civic Center. The cost of each ticket for faculty and staff members will be \$7 when purchased for groups of 20 or more, or if individual

faculty or staff members buy their tickets at [www.seminoles.com](http://www.seminoles.com) using the “FACSTAFF” promotional code. The top four departments that have the most employees in attendance will be eligible to compete in a Faculty/Staff Shootout throughout the game. To learn more, call Jamaal Walton at (850) 645-4851, or send an e-mail to [jow07@fsu.edu](mailto:jow07@fsu.edu).

>>**‘Free admission’ coupons for swimming:** This year, Florida State faculty and staff members have an added incentive to come out and cheer on the Seminoles swimming and diving team at its home events: free use of the new Morcom Aquatic Center when the team isn’t using it for practice. At swimming and diving team home events, employees can simply present their FSUCard identifications to receive a coupon, which can be redeemed through March 2009 for free admission to the Morcom Aquatic Center, 2560 Pottsdamer St. The Seminoles compete against the Florida Gators on Tuesday, Nov. 25, at 5 p.m. at the Leach Center. For a schedule of pool hours, call 644-POOL (644-7665).

## Tried-and-true: Handwritten essays still as effective as typed

Whether written by hand or typed using a computer, college students’ essays show no significant difference in scores, according to a study produced by the Florida State University Center for Advancement of Learning and Assessment (CALA).

The research, which was funded by the Florida Department of Education, not only examined the effects of handwriting versus typing on the quality of the students’ essays, but also whether variations existed in the scoring of the essays, which

could be attributed to one mode of writing or the other.

Graduate and undergraduate students enrolled in Florida’s teacher training programs responded to essay prompts from the Florida Teacher Certification Examinations (FTCE) using both the computer and paper and pencil. Students’ preplanning activities also were captured in both modes. Approximately half of the essays in each mode were transcribed, and both the original and transcribed essays were scored holistically by trained raters. Holistic rater training included a literature review on rater bias and its effect on scoring.

Findings showed no significant difference in scores between the modes, nor was rater bias present. Students tended to do more extensive preplanning for the paper-and-pencil essays than for the computer-typed essays. Even when students did their testing on computer, given a choice, they often preferred planning on paper. There was little correlation, however, between preplanning and the computer-typed essay scores.

“With advances in technology, we are seeing a greater opportunity for cost-saving measures, as well as speed in score reporting,” said Faranak Rohani, the director of CALA. “This study provides empirical support for using the computer-based writing assessment for the essay portion of the FTCE. Certain issues, however, should be considered, such as the quality of rater training and the preference for preplanning on paper.”

CALA, based at the university’s research and development complex, is a pioneer in research and the design of multimedia instructional materials and customized assessments. It seeks and develops alternatives that both inform policy makers and provide practical applications for educators.



**The old-fashioned way:** Florida State students Kirsten Duff and Evan Watts demonstrate the art of the hand-written essay.

Byard Stern



Ronald Doel in Reykholt, Iceland.

# Historian's Arctic research has him standing

# on TOP of the WORLD

By Barry Ray  
NEWS AND PUBLIC AFFAIRS

It's one of the coldest and most remote areas on Earth, but the Arctic region has long held great strategic interest for a number of nations. Now, a Florida State University researcher is leading an international team that is working to produce one of the most comprehensive histories to date of the northernmost part of the world from the late 19th century to the present.

Ronald E. Doel, an associate professor of history at FSU, is the project leader of "Colony, Empire, Environment: A Comparative International History of

Twentieth Century Arctic Science," a \$1.1 million project funded by the European Science Foundation. Nine historians from seven nations — the United States, Canada, England, Norway, Denmark, Sweden and Russia — are working on this innovative research effort.

"What we're doing is looking at the Arctic from a comparative international perspective," said Doel, who also has received individual funding from the National Science Foundation's Office of Polar Programs. "There have been a lot of histories written from one national

slice or another — a Canadian history of the Arctic, a U.S. focus, a Russian focus. We have nine members in seven countries, all looking at the Arctic, all talking with one another, beginning to develop a different kind of story that joins the voices together to fill in holes in individual narratives."

Doel said that he and his colleagues are focusing on how perceptions of the Arctic have changed from the period of colonization to the time of the Cold War, when the region's military value became one of the main concerns — particularly for the Soviet Union and the United States. The historians' research will take them all the way up to the modern era, a time of increasing autonomy for some of the Arctic's indigenous people. (For example, Canada established Nunavut, now the largest of its territories and provinces, in 1999. The new territory's population is composed mostly of native Inuits.)

Another part of the work that Doel's team is doing involves the history of science and technology in the Arctic, as well as how people once thought about the environment and how that thinking has changed over time.

"One of the things I often ask my freshmen in class is, 'When was the first time that the Pentagon got interested in climate change and global warming?'" Doel said. "The brave students say maybe the 1980s; most say the 1990s. But one of the documents we got from the archives shows that one of the first in-depth discussions of polar warming occurred in the Pentagon — it was labeled secret at the time — in 1947. And the concern at that time was not over sustainability or the kind of concerns that motivate many currently, but, rather, national security interests. What happens, for example, if the growing season becomes longer in the Soviet Union? What happens if the harbors are ice-free for many more months out of the year? Will that increase the Soviets' strength in the world?"

Doel said that one of the more interesting developments to come out of the project has been the rare opportunity for historians to work together.

"Unlike scientific researchers, historians tend to be lone wolves, working in comparative isolation," he said. "One of the best memories I've already taken away from this are the long evening discussions with the Norwegians and

Please see **DOEL, 9**

Suzanne Zeller



# The Source

## News from Human Resources

### TRAINING AND ORGANIZATIONAL DEVELOPMENT

>>**TRAINING CLASSES:** A current schedule of personal, professional and organizational development training classes is available online at [hr.fsu.edu/train](http://hr.fsu.edu/train). The fall 2008 schedule of classes lists course offerings through December. **Information:** Office of Training and Organizational Development, (850) 644-8724.

### HUMAN RESOURCES

>>**SEPTEMBER/OCTOBER 2008 RETIREES:** **Cheryl Mask Brockman**, clerical assistant, Student Financial Aid; **Betty Brown**, business analyst, University Computing Services; **Deborah Coury**, chief financial officer, College of Medicine; **Victor Ferreros**, director of marketing, Northwest Regional Data Center; **Leslie Freeman**, technical support analyst, Vice President for Research; **Kay Hollis**, enrollment management specialist, Admissions; **Michael McGee**, skilled trades worker, Residence Halls; **Jeanne Meliori**, media specialist, College of Criminology and Criminal Justice; **Yvonne Powell**, facilities supervisor, Residence Halls; **Judith Russell**, administrative specialist, Thagard Student Health Center; **Anne Stone**, grants compliance analyst, Research Foundation; **Susan Stripling**, office administrator, College of Education – Dean's Office; **Robert Thompson**, assistant director, Facilities Planning.

>>**CAPITAL CASUALTY AUTO/HOMEOWNERS INSURANCE:** Payroll deduction for auto/homeowners insurance stopped as of the Oct. 24 paycheck. All affected employees were notified of this change by mail. To continue this benefit by paying directly to the insurance company, contact Wachovia Insurance, (866) 566-4301.

>>**OPEN ENROLLMENT:** Deductions will begin with the Dec. 5 paycheck for any changes made during open enrollment. Employees should continue to monitor their paycheck information

at [www.omni.fsu.edu](http://www.omni.fsu.edu), and notify the HR Benefits office if there are any discrepancies. **Information:** Human Resources – Benefits, 644-4015.

>>**GABOR AGENCY GUARANTEED LIFE INSURANCE OPEN ENROLLMENT:** Available through Nov. 28, all full-time employees can purchase Universal Life Extra, a permanent life insurance policy that is guaranteed for the life of the insured, as long as the level premiums are paid.

Employees now may apply for up to four times their salaries, with a maximum limit of \$250,000. Employees and their spouses are being offered this coverage during the open enrollment period. During this time only, eligible employees may qualify for Universal Life Extra on a guaranteed standard issue basis. Larger coverage amounts are available to employees, spouses and eligible children on the same rate basis with evidence of insurability that meets insurance company approval. Universal Life Extra policies may be continued after retirement or termination of employment, with no additional premium or any reduction of coverage. **Information:** Gabor Agency (850) 894-9611, ext. 6.

>>**ROTH/TAX-SHELTERED ANNUITY DEDUCTIONS:** Employees who have an existing Roth or tax-sheltered annuity deduction now are able to change the amounts through "Employee Self Service." Only existing dollar amounts can be changed. Employees cannot start a new deduction or restart one that has been stopped. Refer to the job aid located on the HR Department's Web site at [www.hr.fsu.edu](http://www.hr.fsu.edu) or on the ERP Web site at [www.erp.fsu.edu](http://www.erp.fsu.edu).

>>**NEW EMPLOYEE ORIENTATION:** New employees can take the required university orientation online or in a classroom. To register for either version, go to the Human Resources Web site at [hr.fsu.edu](http://hr.fsu.edu). To register, click the "New Employee Information" link for orientation sessions. Participants must certify their completion of online New Employee Orientation by faxing a completed copy of the certification of completion and evaluation of orientation to the Office of Training and Organizational Development, as indicated on the form.

The next on-site "New Employee Orientation" sessions are scheduled for Monday, Dec. 8. Information, schedules and necessary forms pertaining to New Employee Orientation classroom sessions are available at [hr.fsu.edu/train](http://hr.fsu.edu/train), under the "New Employee Information" link. **Information:** Pat Mullins or Sandra Dixon, (850) 644-8724.

### DOEL from page 8

the Swedes and Russians, each of us discovering something we never would have been able to know had we been working in our archives back in our home countries. It has been a marvelous collaborative experience and something that we're hoping to share with our graduate students."

Members of Doel's team, who previously met in Greenland, have just returned from a conference in Iceland.

Doel hopes that they will have another opportunity to get together at a Russian conference next year. He says the group's long-term goal is to publish their research in a book that will "join the voices together" to fill in holes in individual narratives.

"Ultimately, I would love to see one of the very first internationally collaborative histories in which authors are able to tell a unified narrative of this fascinating region," he said. "Of being able to talk about the connections between Arctic researchers in Canada,

for example, and how their experiences differed from those in the Soviet Union and other countries at the time. When the United States became interested in the polar regions during the Cold War, what was being discussed in the major capitals of Europe, in Oslo and in Stockholm? We can now get at that by looking at the archives of the major players in this story. And for the first time, historians are able to get together as a group, collaboratively talk about those stories, and produce a narrative. That's really quite new."

## RECOGNITIONS

**Steven Pfeiffer**, Ph.D. (Educational Psychology and Learning Systems), was interviewed by Linda C. Neumann for the article "Finding the Glory – On and Off the Playing Field," published on the Web site 2eNews-letter.com. In the article, Pfeiffer discussed topics regarding "the disparity in attitudes toward the athletically gifted and the academically gifted child."

## PRESENTATIONS

**Lisa Waxman**, Ph.D. (Interior Design), presented the paper "Staying Connected: Designing to Enhance Social Opportunities for Older Adults" and co-presented the poster "Privacy Needs and the Muslim Woman: An Examination of Contemporary Kuwaiti Housing Types" at the international conference of the Environmental Design Research Association at the University of Veracruz, Mexico, June; Waxman co-presented the paper "Interior Design in Second Life: Collaborative Criticism of Virtual Environments" at the conference of the South

Region Interior Design Educators Council, Auburn University, October.

## SERVICE

**John Fraser**, M.S. (Research and Economic Development), has been appointed to the board of the Florida Institute for Commercialization of Public Research. The institute was established as a result of legislation passed in 2007 to stimulate growth of science and technology-based companies in industries that are driving the global economy. Related initiatives include the availability of gap funding targeted toward universities to help take new ideas through the "proof of concept" stage and accelerate the formation and launching of start-up companies out of public re-

search organizations.

**Jeffrey Ayala Milligan**, Ph.D. (Educational Leadership and Policy Studies), has been elected to a three-year term as executive director of the Philosophy of Education Society; Milligan wrote the article "Educational Policy Reform in the Southern Philippines," published in the *Asia Pacific Journal of Education*, Vol. 28, No. 4; Milligan co-presented "Complexities of Belonging in Democratic/Democratizing Societies: Islamic Identity, Ethnicity and Citizenship in the Netherlands and Aceh" at the XI biennial conference of the International Network of Philosophers of Education, Kyoto, Japan, August; Milligan presented "Islam and Educational Policy Reform in the Southern Philippines: Implications for Teacher Education" at the Inter-

national Conference on Teacher Education in the Muslim World, Kuala Lumpur, Malaysia, July; Milligan co-presented "Faith with Intelligence in the Context of Radical Social Change: A Critique of John Dewey's Faith in Intelligence," with H. Zhang, at the annual meeting of the American Educational Studies Association, Savannah, Ga., November; Milligan co-presented "Islam, Ethnicity and Civic Identity," with M. Merry, at the annual meeting of the Comparative and International Education Society, New York, March; Milligan was awarded a \$40,000 grant from the Spencer Foundation to study post-conflict civic education in the Indonesian province of Aceh.

## GRANTS

**Jonathan Adams**, Ed.D. (Communication), has been awarded a \$212,000 Small Business Innovation Research grant, in collaboration with Northern Speech Services of Gaylord Mich., to create Web-based learning for clinicians interested in treating people with memory disorders.

# Research seeks to uncover new cancer therapies with grant

With a four-year, \$707,000 grant from the American Cancer Society, Yanchang Wang, assistant professor of biomedical sciences in the Florida State University College of Medicine, hopes to learn how a particular enzyme could possibly help put the brakes on the runaway cell division process that occurs in many forms of cancer.

Wang's research involves the role of an enzyme known as Cdc14 in deactivating the cell division process set in motion by another enzyme, Cdk1.

"From this proposed experiment, we expect to find a new way to regulate cell division," Wang said. "Cdk1 is the key driving force for cell division, so it's quite important."

The enzymes Wang is studying are part of the cellular signaling processes that protect genes and chromosomes when cells divide, ensuring that the number of chromosomes in each new cell is precisely correct. This process is critical in that an abnormal number of chromosomes can lead ultimately to cancer.

Wang conducts his experiments on yeast because it abides by the same regulatory processes during cell division as human cells.

"Yeast is a single cell, but it is really powerful and it will answer different kinds of biological questions, especially for the regulation of cell division," Wang said.



With the addition of this grant, Wang has now attracted more than \$1.3 million in external research funding since arriving at the Florida State University College of Medicine in 2003 as one of the first faculty recruited to the college's department of biomedical sciences.



## LANDMARK STUDY

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the central goal of stem cell therapy, which is to successfully convert adult tissue back to an embryo-like state so that it can be used to regenerate or replace damaged tissue. Such therapies hold out hope of treatments or cures for cancer, Parkinson's disease, multiple sclerosis, spinal cord injuries and a host of other devastating disorders.

Using mouse and human embryonic stem cells, FSU researchers employed advanced imaging techniques and state-of-the-art genomics technology to demonstrate, with unprecedented resolution along long stretches of chromosomes, which sequences are replicated first, and which occur later in the process of differentiation.

"Understanding how replication works during embryonic stem cell differentiation gives us a molecular handle on how information is packaged in different types of cells in manners characteristic to each cell type," said David M. Gilbert, the study's principal investigator. "That handle will help us reverse the process in order to engineer different types of cells for use in disease therapies." Internationally renowned for his body of

cutting-edge research on chromosomal structure and reproduction that he began as a doctoral student at Stanford University in the 1980s, Gilbert joined the FSU faculty and was appointed as the first J. Herbert Taylor Distinguished Professor of Molecular Biology in 2006.

Results from the FSU study, which includes contributions from researchers at three other institutions, are described in a paper published in the October 7, 2008, edition of *PLoS* (Public Library of Science) *Biology*, a peer-reviewed journal that showcases biological science research of exceptional significance. So prodigious were the findings that the current paper — "Global Reorganization of Replication Domains During Embryonic Stem Cell Differentiation" — is focused solely on results observed in the mouse embryonic stem cells; data on the human cells will be detailed in a future report.

"We know that all the information (DNA) required to take on the identity of any tissue type is present in every cell, because we already can, albeit very inefficiently, create whole animals from adult tissue through cloning," Gilbert said. "We also can make a kind of artificial embryonic stem cells, called induced pluripotent stem cells, out of many adult

cell types, but there are two major hurdles remaining. First, the methods currently used rely on the unnatural retroviral insertion of genes into patients' cells, and these genes are capable of forming tumors. Second, this method is very inefficient as well because only one in 1,000 cells into which the genes are inserted becomes pluripotent. We must learn how cells lose pluripotency in the first place so we can do a better job of reversing the process without risks to patients.

"The challenge is, adult cells are highly specialized and over the course of their family history over many generations they've made decisions to be certain cell types rather than others," he said. "In doing so, they have tucked away the information they no longer need on how to become other cell types. Hence, all cells contain the same genetic information in their DNA, but during differentiation they package it with proteins into 'chromatin' in characteristic ways that define each cell type. The rules that determine how cells package DNA are complicated and have been difficult for scientists to decipher."

But, Gilbert noted, one time that the cell "shows its cards" is during DNA replication.

## WEATHER

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computer all came together to create a new way of approaching atmospheric theory and weather forecasting, Harper writes.

In "Weather by the Numbers," Harper also examines the efforts of meteorologists to professionalize their discipline during the interwar years and the rapid expansion of personnel and observational assets during World War II. She describes how, by the 1950s, academic, Weather Bureau and military meteorologists had moved atmospheric modeling from research subject to operational forecasting.

"Not only did they have to contend with barely effective models and balky computers, they faced having to convince their colleagues that numerical modeling techniques would lead to better and more timely predictions," Harper said.

Challenging previous accounts that give sole credit for the development of numerical weather prediction to digital-computer inventor John von Neumann,



*Kristine Harper*

Harper points to the crucial contributions of Carl-Gustav Rossby, founder of the Massachusetts Institute of Technology's meteorology program and a member of the renowned "Scandinavian tag team" of meteorologists who worked with von Neumann. (In 1945, von Neumann had settled on weather prediction as

a suitably difficult scientific problem amenable to a numerical solution to showcase the capabilities of his proposed computer.) The team's transformation of the discipline, Harper writes, was the most important intellectual achievement of 20th-century meteorology and paved the way for the growth of computer-assisted modeling in all of the sciences.

"Having spent many years working with these models as a meteorologist, discovering their history was a fascinating experience," she said.

While "Weather by the Numbers" is Harper's first academic book, it promises not to be her last. She is currently writing another book on the use of weather control as a tool of the state in mid-20th-century America. Like "Weather by the Numbers," it will address issues related to the history of science and technology, and environmental history.

"Because of my background in meteorology and oceanography," Harper said, "I continue to be drawn to historical topics that draw on my scientific expertise and have the potential to inform policy decisions in the 21st century."

# Florida State's Nobel Laureates

Robert Mulliken

## Bronze busts commemorate the six

Over the history of Florida State University, six Nobel Laureates have served on the faculty. Now these remarkable scholars have been immortalized with bronze busts by the university's Master Craftsman Program at the direction of Provost and Executive Vice President for Academic Affairs Lawrence G. Abele.

After the Fall Meeting of the General Faculty adjourned on Oct. 31, Abele ceremonially unveiled the busts along the breezeway that connects the College of Medicine to the Department of Psychology.

*Florida State's former Nobel Laureates*

• **Paul Adrien Maurice Dirac**, 1902-1984: Dirac was an outstanding theoretical physicist whose work was fundamental to the development of quantum mechanics and quantum electrodynamics. He was awarded the Nobel Prize in Physics jointly with Erwin Schrödinger in 1933 for contributions to atomic theory.

• **Robert Sanderson Mulliken**, 1896-1986: Mulliken, a physicist and chemist, brought Florida State University its first Nobel Prize. While serving as Florida State University Distinguished Research Professor of Chemical Physics from 1964 to 1971, Mulliken was awarded the 1966 Nobel Prize in Chemistry for his work on molecular orbital theory in computing the structure of molecules. Mulliken was also Distinguished Professor of Physics and Chemistry at the University of Chicago.

• **Konrad Emil Bloch**, 1912-2000: Bloch was co-recipient with Feodor Lynen of the 1964 Nobel Prize in Medicine or Physiology for discoveries concerning the mechanism and regulation of the cholesterol and fatty acid metabolism — how cholesterol is made in the body.

• **James M. Buchanan**, 1919-: Buchanan taught at Florida State University from 1951 to 1956. An economist renowned for his work on public choice theory, Buchanan won the 1986 Nobel Memorial Prize in Economic Science for his development of the contractual and constitutional bases for the theory of economic and political decision-making.

• **John Robert Schrieffer**, 1931-: Schrieffer won the 1972 Nobel Prize in Physics, with John Bardeen and Leon Neil Cooper, for developing the first successful microscopic theory of superconductivity.

*Florida State's current Nobel Laureate*

• **Sir Harold W. Kroto**, 1939-: Kroto, one of the co-recipients of the 1996 Nobel Prize in Chemistry, has been Francis Eppes Professor in Florida State University's Department of Chemistry and Biochemistry since 2004. With Richard Smalley and Robert Curl, he was responsible for the Nobel-winning discovery of Buckminsterfullerenes or "buckyballs" — molecules consisting of 60 carbon atoms in the shape of a soccer ball.



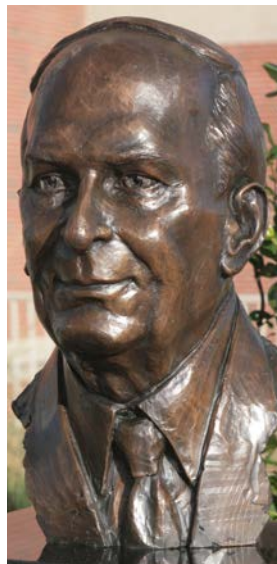
Paul A.M. Dirac



Konrad Bloch



James M. Buchanan



Robert Schrieffer



Sir Harold W. Kroto