

Commencement to feature Pope Edwards, Molfese

More than 800 to receive degrees during Aug. 10-11 graduation exercises at Devaney

University Communications

UNL's summer commencement will showcase more than 800 graduates receiving degrees Aug. 10 and 11 at the Bob Devaney Sports Center.

The ceremonies include one for post-graduate degrees at 3 p.m. Aug. 10 and one for baccalaureate degrees at 9:30 a.m. Aug. 11. Approximately 830 students will receive diplomas, some 433 for master's, doctoral and law degrees and about 400 for baccalaureate degrees.

Carolyn Pope Edwards, Willa Cather Professor and professor of psychology and child, youth, and family studies at UNL, will

give the address at the postgraduate ceremony.

Dennis Molfese, director of UNL's neuroimaging center and Mildred Francis Thompson Professor of psychology, will give the address at the baccalaureate ceremony.

Harvey Perlman, chancellor, will preside over both exercises.

For the second year, UNL's summer commencement will feature environmentally friendly practices.



Pope Edwards



Molfese

As the graduates cross the stage to receive degrees, they will do so in "green" regalia and walk past live plants that will be repurposed.

While "green," the gowns will be the traditional academic black. The gowns are made from sustainably harvested wood pulp, and zippers are made from 100-percent recycled PET. Earth-friendly packaging contains a bio-film material that facilitates the decomposition process of the cap and gown bag.

The cost of the green regalia is slightly higher than standard regalia said Jennifer Verhein, assistant director of Registration and Records, who oversees commencement. But, the trend is to sustainability, and students, faculty and administrators have been asking for earth-friendly options.

The sustainable practices also extend to the plants used as ceremony decorations. Grown and purchased from the UNL Horticulture Club, the greenery will be incorporated into campus planting areas.

All ceremonies are free and open to the public. The ceremonies will be Web-streamed live from the Devaney Center through a link at <http://www.unl.edu>.

Team crafts nanotube that mimics cell function

By Tom Simons
University Communications

An international team of scientists, including UNL chemist Xiao Cheng Zeng, has created what is in effect a nanoscale sieve that is very selective in what it will allow to pass through — and performs in much the same way as the potassium ion channels that are vital components of virtually all living cells.



Zeng

It's also the first synthetic nanotube that possesses a uniform diameter, as well as being self-assembling and hydrophobic, characteristics that could lead to industrial and medical breakthroughs.

"This nanotube can be viewed as a stack of many, many rings," said Zeng, Ameritas University Professor of chemistry. "The rings come together through a process called self-assembly, and it's very precise. It's the first synthetic nanotube that has a very uniform diameter. It's actually a sub-nanometer tube. It's about 8.8 angstrom."

One angstrom is one-10th of a nanometer, which is one-billionth of a meter.

In living cells, ion channels allow potassium ions to pass through cell membranes, but don't allow sodium ions through, even though the potassium ion (atomic weight 39) is nearly 70 percent larger than sodium (atomic weight 23).

"We found a totally different potassium channel," Zeng said. "It's the same function, but it's totally different from Mother Nature. We, possibly for the first time, mimicked Mother Nature's potassium pore by using a uniform subnanometer pore, but why the bigger ion can go through and the smaller one can't is

NANOTUBE | page 4



Matt Waite, a professor of practice in journalism and mass communications, flies a UAV in UNL's Drone Journalism Lab. The lab is located in Andersen Hall.

Drone journalism program ready for takeoff

By Troy Feddersen
University Communications

Matt Waite, three UNL students and a \$300 toy flown via smart phone are helping shape the future of news reporting.

"This quad-copter is available at any mall and is literally a flying video game, says so right here on the box," said Waite, a professor of practice in Journalism and Mass Communications. "But, it's also a device that you can easily control and will transmit real-time video back to your smart phone or iPad."

"When I look at this, I see a potential new tool that can help gather and report news."

That vision has put UNL at the forefront of developing how and if journalists can use unmanned aerial vehicles, also known as drones.

With the help of Gary Keibel, former dean of Journalism and Mass Communications, Waite formed the Drone Journalism Lab in November 2011. In June, the lab received a \$50,000 John S. and James L. Knight Foundation award that will help launch the drone study, Waite said.

"As soon as the grant check arrives, we'll start buying bigger,



CRAIG CHANDLER | UNIVERSITY COMMUNICATIONS

Matt Waite holds the \$300 quad-copter that was initially used to show how drones could be used to gather news. A \$50,000 Knight Foundation grant is helping Waite purchase larger, more versatile drones to further the research.

stronger, faster devices," Waite said. "Our goals in the next year are to get some UAVs in the air, test them out and write about our experiences with different models. We will also begin working on the ethical framework for news managers and others to consider before they start using UAVs."

The drone journalism concept grew from Waite's own experi-

ences covering natural disasters as a newspaper reporter in Nebraska, Florida and Arkansas. Inspiration struck a year ago at a digital mapping conference in San Diego.

"I learned very quickly that one of the hardest things when covering a natural disaster is discovering where do you start," said Waite.

DRONES | page 4

Researching UAVs @ UNL

Others at UNL helping shape research into the many uses of unmanned aerial vehicles includes:

NIMBUS Lab

Led by Sebastian Elbaum and Carrick Detweiler, the Nebraska Intelligent Mobile Unmanned Systems Lab is working to develop more capable and dependable UAVs through improvements in software, robotics and sensor networks. The lab organized a UAV workshop last month designed to develop drone research partnerships.

<http://nimbus.unl.edu/>

IANR

Researchers in the Institute for Agriculture and Natural Resources have been using UAVs for aerial scouting of crops and turfgrass. The robotic helicopters being used were developed by UNL's Vishal Singh through his company Pixobot.

<http://go.unl.edu/7bg>

Water for Food Institute, UN group sign partnership



COURTESY

Ann Tutwiler, director general of knowledge for the Food and Agriculture Organization of the United Nations, and NU President James B. Milliken sign a memorandum of understanding earlier this month.

By Melissa Lee
NU Central Administration

The University of Nebraska's Robert B. Daugherty Water for Food Institute has gained a partner to assist with research and education efforts in water and food security.

In early July, NU President James B. Milliken signed a memorandum of understanding with the Food and Agriculture Organization of the United Nations. The signing ceremony was held in Rome, Italy, where FAO is headquartered.

"The University of Nebraska and the Food and Agriculture Organization have worked together many times in the past and I could not be more pleased that we are taking our partnership to the next level," Milliken said. "FAO's network and influence

at the international level is unrivaled and the opportunity to tap into these resources will be highly beneficial for the university and Nebraska. In return, the work of the Daugherty Institute will support in a unique way FAO's critical efforts to sustainably meet the nutritional needs of a growing population."

Areas of focus in the partnership include:

- Sustainably increasing crop yields and water productivity using mapping, modeling and information systems such as the Global Yield Gap Atlas, NU's initiative to provide estimates of the gap between current average farm yields and the potential yield ceiling for major food crops; and

PARTNERSHIP | page 4

Hastings to lead NU Foundation

Brian Hastings, a senior executive at Ohio State University, has been named president and chief executive officer of the University of Nebraska Foundation.

Hastings brings more than two decades of experience in higher education fundraising, along with strong expertise in implementing universitywide advancement strategies. He most recently served as executive director of Ohio State University's \$2.5 billion



Hastings

fundraising campaign, in addition to his duties as senior associate vice president at the university.

The foundation's board unanimously voted to accept the recommendation of the search committee in naming Hastings to the position.

"As a first-generation college graduate and lifelong Midwesterner, I am truly humbled by this opportunity to work with the outstanding foun-

dation staff in service to the university and the citizens of Nebraska," Hasting said. "I was impressed with the great accomplishments occurring on each of the four campuses, inspired by the leadership and commitment of the volunteers, and warmed by the incredible sense of pride exhibited by everyone."

Hastings, and his wife Sharon, have two young children. He plans to begin his duties at the University of Nebraska Foundation in early fall.

<http://go.unl.edu/hastings>

Fineberg named Visiting Presidential Professor

Jonathan Fineberg has been named the University of Nebraska's next Visiting Presidential Professor.

Fineberg is a professor emeritus in art history at the University of Illinois at Urbana-Champaign and adjunct curator at the Parrish Art Museum in Southampton, N.Y. His appointment with NU is for the 2012-13 academic year and will include four weeklong visits, starting in September, to NU campuses. During each visit Fineberg will present public lectures, to be published as a book following his professorship, and participate in other activities with the university and Lincoln and Omaha communities.



Fineberg

Written by Fineberg, "Art Since 1940: Strategies of Being" (third edition), is used extensively as a textbook for modern art history classes in universities around the country. He joins former U.S. Poet Laureate Ted Kooser, who has served as NU Presidential Professor since 2005, and artist Enrique Martinez Celaya, who served as Visiting Presidential Professor from 2007 to 2010.

Fineberg's appointment was announced by James B. Milliken, NU president.

In addition, Fineberg's wife, Marianne Malone, an artist and author is exploring opportunities to work with students in the university's writing programs and with young readers in area schools.

For more information on Fineberg, go to www.jonathanfineberg.com.

Fineberg's "Origin of the Image: What Modern Art Tells Us About the Mind" lectures at UNL will be at 5:30 p.m. on Sept. 11, Oct. 30, March 12 and April 2. All lectures are at the Sheldon Museum of Art.

Research collaboration tool available online

Faculty at UNL have a new tool to help identify potential research collaborators across the University of Nebraska system and the nation.

"Research Nebraska," available at <http://go.unl.edu/m5j>, is a web-based directory that enables users to search nationally for research collaborators and scientific experts. Faculty at UNL, University of Nebraska Medical Center and University of Nebraska at Omaha can use this tool to find potential research collaborators within or beyond the University of Nebraska system.

The Office of Research and Economic Development is providing this service to make it easier for faculty to build interdisciplinary research teams. It's part of broader efforts to support interdisciplinary research, expand research opportunities and help faculty successfully complete for external funding.

Prem S. Paul, vice chancellor for research and

economic development, said that identifying research collaborators with specific scientific and technological expertise can be a challenge in building interdisciplinary research teams and successfully competing for large-scale, center grants.

"This database should make it easier for our faculty to find scientific experts across the basic-to-applied research continuum to enhance their research teams," Paul said.

The directory contains profiles of selected faculty at each NU campus, including information on their recent grants, publications, and internal and external collaborators.

Known as SciVal Experts, the directory is populated by Elsevier, a publisher of scientific journals.

For more information about Research Nebraska, contact Noah Clayton at nclayton3@unl.edu, 402-472-8031.

Biomed research teams sought for NIH grant

The Office of Research and Economic Development is conducting an internal competition to identify a team to develop the UNL proposal that will be submitted to NIH's Centers of Biomedical Research Excellence program in early 2013.

NIH allows only one application per institution per fiscal year. Faculty interested in developing a COBRE proposal must submit a notification of intent to submit by Aug. 24 via NUgrant.

The COBRE program is designed to strengthen an institution's biomedical research infrastructure. This program currently funds UNL's Nebraska Center for Virology and Redox Biology Center.

For more information regarding the internal selection process contact Noah Clayton at 402-472-8031.

<http://go.unl.edu/cobre>

Big Ten honors 65 Huskers

The Big Ten Conference named 65 UNL student athletes as recipients of the Big Ten Distinguished Scholar Award. The Huskers are among 587 Big Ten student athletes from every conference institution and 36 sports who earned a minimum 3.7 grade-point average in the previous academic year.

Coach Gary Pepin's track and field squad led the Huskers with

16 student-athletes selected. The Huskers football team added six selections, while the women's soccer and cross country teams each had five student-athletes awarded.

For more information, including a complete list of Big Ten Distinguished Scholar Award winners, go to <http://go.unl.edu/wpt>.

Annual salary notices on Firefly

UNL employees can access annual salary notifications via Firefly, the University of Nebraska's employee information system.

Salary notifications are available at <https://firefly.nebraska.edu>. After logging in with username and password, click the "Employee Self Service" tab. In the "Payment" section, then click the "Annual Salary Notification" link.

The salary notifications were made available through Firefly on July 12.



<https://firefly.nebraska.edu>

Dean changes announced

Hibberd chosen new dean, director of UNL Extension

Charles "Chuck" Hibberd, former district director of the Panhandle Research and Extension Center, has been selected dean and director of UNL Extension.

If approved by the NU Board of Regents, the Lexington native and UNL graduate will assume the position Oct. 1.

Hibberd has been director of Extension and associate dean of agriculture at Purdue University since 2007. Previously, he was director of the Panhandle center at Scottsbluff for 13 years.

Hibberd assumes leadership of UNL Extension at a critical time, said Ronnie Green, Harlan vice chancellor of the Institute of Agriculture and Natural Resources.

When Hibberd spoke to faculty and staff earlier this month

during the interview process, he said, "We can't sit on our laurels. We can't continue to do things the way we've always done them."

He praised the "big, bold projects" under way at UNL and said UNL Extension is viewed as a national leader.

Hibberd received his bachelor's degree in agriculture, with an animal science major and his master's and doctorate degrees from Oklahoma State University in animal science and animal nutrition, respectively. He was a faculty member at OSU from 1982-94.

Hibberd replaces Elbert Dickey, who retired this summer. Alan Moeller, assistant IANR vice chancellor, is serving as interim dean and director of UNL Extension until Hibberd arrives.

<http://go.unl.edu/hibberd>



Hibberd

Giesecke to leave libraries, help coordinate accreditation

After 16 years leading UNL Libraries, Joan Giesecke announced July 17 she is stepping down as dean to accept a new administrative assignment.

In a message to library colleagues, Giesecke cited "health challenges" as her reason for the change.

Chancellor Harvey Perlman and Ellen Weissinger, senior vice chancellor for academic affairs, have asked Giesecke to coordinate the university's preparation for the Higher Learning Commission accreditation (due in 2016).

Giesecke became dean in March 1996 when Kent Hendricksen became associate vice chancellor for information services. She first joined UNL in 1987 as assistant dean

for Automation and Technical Services and a year later was promoted to associate dean for Collections and Services.

As dean, Giesecke has led all efforts for the state's only comprehensive research library including the main library and six branches.

In 2009-2010 she was interim director of University of Nebraska Press and in 2010 was interim associate vice chancellor for extended education and outreach.

She has taught numerous graduate and undergraduate classes and workshops and written six books.

Weissinger said libraries associate dean Nancy Busch will be stepping in as interim dean on Aug. 12.

<http://go.unl.edu/giesecke>



Giesecke

Technical ag's Sleight to retire after 6 years on Curtis campus

Weldon Sleight, dean of the Nebraska College of Technical Agriculture, has announced that he will retire in December.

As Sleight, dean of the college since 2006, prepares to retire, he can point to a number of improvements that are helping the college give rural Nebraska new ways to survive and even thrive.

NCTA's most obvious success is a construction boom that produced a new Education Center, an addition to the Veterinary Teaching Hospital, a new resi-

dence hall and a biomass project to use wood chips from red cedar trees rather than natural gas for the school's heating system.

Under Sleight's leadership, NCTA has worked entrepreneurship into its entire curriculum.

Other efforts include the 100-Acre Farm, 100 Beef Cow and the NCTA Business Builder ownership programs, and there's also the Combat Boots to Cowboy Boots initiative aimed at returning soldiers.

<http://go.unl.edu/sleight>



Sleight

New Hires

UNL welcomes these new employees hired in June. For more information on the "New Hires" list, contact Troy Fedderson at tfedderson2@unl.edu or 402-472-8515.

Mona Amatya, Food Science and Technology, research technologist II

Daniel Bassett, Athletics, women's soccer assistant coach

Jonathan Bateman, Athletics, compliance coordinator

David Birdzell, Engineering, lab mechanic II

Sarah Bublitz, Child Care, assistant teacher

William Coby, OASIS, NU Connections program coordinator

Charles Coley, Research, proposal development coordinator

Matthew Colling, Bureau of Sociological Research, landscape assistant

Elisabeth Dority, Registration and Records, athletic certification specialist

Maria Funk, Research Responsibility — Human Subjects Protection Program, conflict of interest coordinator

Jennifer Gerdes, 4-H Youth Development, extension assistant professor

Georgia Gleason, Admissions, special events assistant coordinator

Gerald Graham, USMARC, custodial maintenance technician

Todd Grier, Campus Rec, outdoor

adventures coordinator

Kelly Heath, Research Responsibility — Institutional Animal Care Program, attending veterinarian

Paulette Inhofe, Payroll Services, payroll technician

Jessica Johnson, Panhandle Research and Extension Center, assistant extension educator

Jennifer Krueger, Campus Rec, injury prevention and care coordinator

Jennifer Larson, Information Services, operations center assistant

Carlos Lopez, Information Services, information systems specialist

Carissa Martin, Arts and Sciences, staff secretary II

Yohlunda Mosley, Admissions, senior associate director for freshmen recruitment

Lisa Oswald, Natural Resources, research technologist II

Amber Patterson, Biological Systems Engineering, office associate

Amanda Prokasky, Child, Youth and Family Studies, project coordinator

Christopher Rudasill, Neuroimaging Center, laboratory supervisor

Joseph Schaffart, Engineering, assistant dean for business and fiscal affairs

Westley Schomer, University Museum, museum exhibit and design technician

Emily Schueth, Athletics, assistant athletic trainer

Bradley Sheriff, Academic Affairs, assistant vice chancellor

Desirae TePoel, 4-H Youth

Development, foundations relations coordinator

Benjamin Terry, Mechanical and Materials Engineering, research assistant professor

Austin Thoms, Athletics, video and administrative coordinator

Lance Todd, Biological Systems Engineering, manager Larsen Tractor Museum

Nicholas Topp, Online and Distance Education, recruiter

John Tridle, Mail Services, mail machine operator

Stacy Underwood, Athletics, rifle head coach

Monte Vandever, Southeast Research and Extension Center, associate extension educator

Jiear Vang, Admissions, web designer coordinator

Rosemary Vestal, University Press, publicist

Kurt Wenninghoff, Animal Science, ag research technician II

Maxine White, Environmental Health and Safety, technician

Katie Wilder, Campus Rec, strength training and conditioning coordinator

Jamie Williams, Athletics, associate athletic director of diversity and leadership

Zhe Yuan, Nebraska Center for Virology, research technician III

Wenliang Zhang, Center for Science, Math and Computer Education, research assistant professor

net
Television

From Ken Burns

A seven-part look at the history and horror of the Second World War

THE WAR
A KEN BURNS FILM

Tues., July 31 thru Thurs., Aug. 2
& Sun., Aug. 5 thru Wed., Aug. 8
At 8 p.m.

PLUS

The War: Nebraska Stories, Pt. 1

Tues., July 31, at 10:30 p.m. & Sun., Aug. 5, at 10:30 p.m.

Canteen Spirit

Wed., Aug. 1, at 10 p.m.

All Hell Can't Stop Us!

Mon., Aug. 6, at 10:10 p.m.

The War: Nebraska Stories, Pt. 2

Mon., Aug. 6, at 10:40 p.m. & Tue., Aug. 7, at 11:30 p.m.

War Comes to Nebraska

Tues., Aug. 7, at 10:05 p.m.

Yanks Fight the Kaiser

Wed., Aug. 8, at 10:10 p.m.

All on NET1/HD

American Life

in Poetry

By Ted Kooser

U.S. Poet Laureate, 2004-2006

Lots of contemporary poems are merely little personal anecdotes set into lines, but I prefer my anecdotes to have an overlay of magic. Here's just such a poem by Shawn Pittard, who lives in California.

The Silver Fish

I killed a great silver fish,
cut him open with a long

thin knife. The river carried
his heart away. I took his

dead eyes home. His red flesh
sang to me on the fire I built

in my backyard. His taste
was the lost memory of my

wildness. Behind amber clouds
of cedar smoke, Orion

drew his bow. A black moon rose
from the night's dark waters,

a sliver of its bright face
reflecting back into the universe.

Poem copyright © 2011 by Shawn Pittard, from his most recent book of poems, "Standing in the River" (Tebot Bach, 2011). Poem reprinted by permission of Pittard and the publisher. Introduction copyright © 2012 by The Poetry Foundation. This column is made possible by the Poetry Foundation (www.poetryfoundation.org) and supported by the UNL Department of English. This column does not accept unsolicited manuscripts.

Classified Ads

For Rent

Townhome available now through approximately May 1 in the Capital Beach area. 3 bdrm and 3 baths. Furnished or not. References required. \$1,400 rent. No smoking. Call 712-579-1073.

Home For Rent or Sale

Near South neighborhood, 2402 D St., 10 minutes from campus. Queen Anne-style home built in 1900. 2 bedroom with loft and finished basement. Call 402-417-5576 for details.

ADVERTISE IT HERE

The Scarlet accepts classified ads. Cost is \$10 for 30 words or less. For additional information call 402-472-8515. The classified deadline is 4 p.m., Aug. 16 for the Aug. 23 edition of the Scarlet.

Lied reports near sellouts in season ticket sales

The Lied Center for Performing Arts season tickets sales for the 2012-13 Season are resulting in near sell-outs for several events. Patrons waiting for the mid-August opportunity to buy single tickets to performances including Frankie Valli, Mannheim Steamroller, Who's Live Anyway and the political season spoof Capitol Steps may have limited or no available seating.

The best way to get tickets to these per-

formances is to create a custom season ticket package. Season ticket holders qualify for early seat selection before single tickets go on sale, and up to a 20 percent discount on ticket prices. The Lied Center ticket exchange policy makes it easy to exchange tickets for a different event if conflicts arise with performances purchased in advance. In addition, season ticket holders are not charged the regular exchange fee for this service.

The season includes 52 performances of 36 shows from a wide range of categories. More than half of the 36 scheduled shows make their Lied Center debut this season.

A season ticket consists of a ticket purchase of four or more events. The Lied also offers a payroll deduction option for UNL employees.

For more information, go to www.liedcenter.org or call 402-472-4747.

'Deans' Days' lecture series continues

A series of presentations will feature UNL deans outlining plans for their respective colleges for the upcoming year. "Deans' Days," organized by the Office of Admissions, continue with the College of Arts and Sciences, 10 to 11:30 a.m. July 26.

The dean presentations — which will include time for comments from participants — are free and open to faculty and staff. The series is a staff development program to teach Admissions recruitment staff about academic opportunities on campus.

For more information, including updates on the location of each "Deans' Days" presentation, go to <http://admissions.unl.edu/deans-days>.

Remaining "Dean's Days" presentations are: July 26, 1 to 1:45 p.m. — General Studies, Gaughan Center, room 202; July 27, 9:30 to 11 a.m. — Business Administration; Aug. 7, 9 to 10:30 a.m. — Education and Human Sciences; and Aug. 7, 2 p.m. — Fine and Performing Arts.

State Museum's bird eggs featured

Bird eggs in the collections of the University of Nebraska State Museum are featured in the July edition of National Geographic Magazine. The photos were taken by National Geographic photographer and Nebraska native Joel Sartore with the assistance of Tom Labedz, collection manager for the zoology division of the State Museum.

One of the photos is available online at <http://go.unl.edu/jfq>.

Nebraska Repertory Theatre



COURTESY

(From left) Alan Knoll, Stephen Spencer and Bob Hall act out a scene from the Nebraska Repertory Theatre production of "Heroes." The play features three World War I veterans engaging in verbal skirmishes. Remaining "Heroes" performances are 7:30 p.m. July 28, Aug. 1, 4 and 2:30 p.m. July 29, all in the Temple Building. For more information on Rep performances, go to www.unl.edu/rep.

Gates to lead July 29 Ross movie talk

The pending global water crisis takes center stage as the Mary Riepma Ross Media Arts Center hosts a 2:45 p.m., July 29 movie talk on the documentary "Last Call of the Oasis." The talk, which follows the 1 p.m. screening of the film, will be led by John Gates, assistant professor of earth and atmospheric sciences.

Gates' movie talk is free and open to the public. Admission to the 1 p.m. screening is at regular Ross prices.

Both "Last Call of the Oasis" and 2012 Sundance Film Festival award-winning "Beasts of the Southern Wild" open July 27 at the Ross. "Last Call of the Oasis," rated PG-13 for some disturbing content and brief strong language, shows through Aug. 2. "Beasts of the Southern Wild," rated PG-13 for thematic material including child imperilment, disturbing images, language and brief sensuality, shows through Aug. 9.

Directed by Jessica Yu, "Last Call at the Oasis" offers a powerful argument for why the global water crisis will be the central issue the world faces

this century. The documentary showcases the vital role water plays daily, exposing defects in the current system and depicting communities already struggling with water issues. The film features activist Erin Brockovich and many experts, including Peter Gleick, Alex Prud'homme, Jay Famiglietti and Robert Glennon.

Gates is a specialist in water quality and underground water resources. He teaches UNL classes on environmental geology and geochemistry. He received a doctorate from Oxford University in 2007 and has taught at UNL since 2009.

Directed by Benh Zeitlin, "Beasts of the Southern Wild" earned the Grand Jury Prize and Excellence in Cinematography Award at the 2012 Sundance Film Festival.

The film tells the story of Hushpuppy, an intrepid 6-year-old girl who, when her father gets sick, goes in search of her lost mother.

For more information on movies at the Ross, go to www.theross.org or call 402-472-5353.



Gates

calendar 3 to do

events | films | theater | exhibitions | lectures

Friday | July 27

Outlook 2012 for Windows orientation, 9 a.m., Nebraska Union. Call 402-472-0585

"Gods of Carnage," Nebraska Repertory Theatre, 7:30 p.m., Temple Building. Call 402-472-1619

Campus Observatory Public Night, 9:30 to 11:30 p.m., UNL campus observatory on top of the Stadium Drive parking garage.

Saturday | July 28

"Heroes," Nebraska Repertory Theatre, 7:30 p.m., Temple Building. Call 402-472-1619

Sunday | July 29

"Heroes," Nebraska Repertory Theatre, 2 p.m., Temple Building. Call 402-472-1619

Tuesday | July 31

2012 Annual Dialogs presented by Keith Dawson, information about setting up online and other types of classes, instruction models, wait lists, curriculum processes, cycle sheets, grading classifications, variable credit and class searches, 3 p.m., Nebraska Union. RSVP required by 5 p.m., July 27 at <http://go.unl.edu/gmx>. Call 402-472-4354

"One-Man Hamlet," Nebraska Repertory Theatre's Destinations 2012 series, 7:30 p.m., Temple Building. Call 402-472-1619

Wednesday | Aug. 1

Clarinet Fest begins (through Aug. 5), Westbrook Music Building. Call 402-472-0582

New Employee Orientation, 9 a.m., East Union. Call 402-472-3106

Monthly Tornado Alert Test, 10:15 a.m.

Introduction to Blackboard, 11 a.m., Architecture Hall. Call 402-472-6163

2012 Annual Dialogs presented by Keith Dawson, information about setting up online and other types of classes, instruction models, wait lists, curriculum processes, cycle sheets, grading classifications, variable credit and class searches, 3 p.m., East Union. RSVP required by 5 p.m., July 27 at <http://go.unl.edu/gmx>. Call 402-472-4354

"Heroes," Nebraska Repertory Theatre, 7:30 p.m., Temple Building. Call 402-472-1619

Thursday | Aug. 2

Fountain Frolics featuring Skylark, free concert, noon, Nebraska Union Plaza. Hot dog lunch available for \$4. Call 402-472-8146

"Jeeves Intervenes," Nebraska Repertory Theatre, 7:30 p.m., Temple Building. Call 402-472-1619

Friday | Aug. 3

Exhibition opening, "Studio Art Quilt Associate's 20th Showcase," International Quilt Study Center and Museum. Call 402-472-6549

First Friday at the International Quilt Study Center and Museum, free admission, 4:30 to 7:30 p.m. Includes live music by the Nebraska Chamber Players at 5:30 p.m. Call 402-472-6549

First Friday reception and "A Legacy of Giving" walking tour, reception 5 to 7 p.m., walking tour of campus and downtown Lincoln 6:30 to 8 p.m., Sheldon Museum of Art.

"Jeeves Intervenes," Nebraska Repertory Theatre, 7:30 p.m., Temple Building. Call 402-472-1619.

Fountain Frolics | Aug. 2

Lunch concert featuring Skylark, noon, Nebraska Union Plaza.

Marching Band Exhibition, Aug. 17

Free concert by the Cornhusker Marching Band, 7 p.m., Memorial Stadium.

Classes begin, Aug. 20

First day of UNL's 2012-2013 academic year.

Campus Observatory Public Night, 9:30 to 11:30 p.m., UNL campus observatory on top of the Stadium Drive parking garage.

Saturday | Aug. 4

"Heroes," Nebraska Repertory Theatre, 7:30 p.m., Temple Building. Call 402-472-1619

Sunday | Aug. 5

Quilt Identification Day, International Quilt Study Center and Museum, reservations required. Call 402-472-6549

"God of Carnage," Nebraska Repertory Theatre 2012 Destinations series, 2 p.m., Temple Building. Call 402-472-1619

Tuesday | Aug. 7

Screening of "Reveal the Path" and question and answer session with filmmaker Mike Dion, 7 p.m., Sheldon Museum of Art. Call 402-472-2461

Friday | Aug. 10

Graduate Commencement, 3 p.m., Bob Devaney Sports Center. Call 402-472-3636 or <http://commencement.unl.edu>

Saturday | Aug. 11

Undergraduate Commencement, 9:30 a.m., Bob Devaney Sports Center. Call 402-472-3636 or <http://commencement.unl.edu>

Monday | Aug. 13

Husker Summer Preview, on-campus open house, 8:30 a.m., Nebraska Union.

Friday | Aug. 17

Cornhusker Marching Band Exhibition Concert, 7 p.m., Memorial Stadium. Free and open to the public. Call 402-472-2505

Saturday | Aug. 18

Big Red Singers Showcase Concert, 3 p.m., Kimball Recital Hall. Free and open to the public. Call 402-472-6865

Sunday | Aug. 19

Last day of open registration for fall semester.

Monday | Aug. 20

Fall semester begins.

Exhibitions | By gallery

Great Plains Art Museum <http://go.unl.edu/9ti> | 472-3082

Contemporary Indigeneity: The New Art of the Great Plains, through July 29

Open Richness: Large scale prints and projected animations by Catherine Meier, Aug. 3 to Sept. 23

Hillestad Textiles Gallery <http://textilegallery.unl.edu> | 472-2911

Best of the Katie Best Collection (1880-1940), through Sept. 7

International Quilt Study Center and Museum www.quiltstudy.org | 472-6549

Quilts of the Homesteading Era

A Tribute to Ardis James, through July 29

Jean Ray Laury: Getting it All Together, through Sept. 2

What's in a Name?, Inscribed Quilts, through Sept. 23

Stars!, American Quilt Study Group Biennial Quilt Study Challenge, through Aug. 19

SAQA Showcase: Studio Art Quilt Associates Invitational, Aug. 3 to Feb. 24

World War II Quilts from the Sue Reich Collection, Aug. 7 to Feb. 10

Kruger Gallery krugercollection.unl.edu | 472-3560

Contrast, through March 15

State Museum, Morrill Hall www.museum.unl.edu | 472-2642

Minerals and Meteorites, through November 2013

Bizarre Beasts

Charlie and Kiwi's Evolutionary Adventure, through Sept. 14

Sheldon Museum of Art www.sheldon.unl.edu | 472-4524

Turning Inside Out: Video Art by Joan Jonas, Nam June Paik and Jennifer Steinkamp, through Sept. 9

A Legacy of Giving: The Anna and Frank Hall Collection, through Sept. 16

The American Mountain Bicycle, July 13 to Sept. 30

Cinema | UNL screenings

Movies are at the Ross Media Arts Center unless otherwise noted.

Beasts of the Southern Wild, July 27 to Aug. 16

Last Call at the Oasis, July 27 to Aug. 2

Elena, Aug. 3-9

Take this Waltz, Aug. 10-23

Five Broken Cameras, Aug. 17-23

Planetarium | Morrill Hall

www.museum.unl.edu

A Starry Tale, 2 p.m., Tuesday through Sunday

Forces of Nature, 3 p.m., Tuesday through Sunday, and 7 p.m., Thursdays

All events are pulled from UNL's online calendar, <http://events.unl.edu>.

• Access show times for the Ross Media Arts Center at www.theross.org or 472-5353.



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www.unl.edu/scarlet

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On the masthead

Pictured is a detail from the garden gates located south of Love Library. If you know of a part of UNL that should be featured in the Scarlet masthead, contact Troy Fedderson at tfedderson2@unl.edu or 472-8515.

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Feces fossils lend insights into connection between Natives, diabetes

By Steve Smith
University Communications,
and Kevin Stacey
University of Chicago Press

Why do Native Americans experience high rates of diabetes? A common theory is that they possess fat-hoarding “thrifty genes” left over from their ancestors — genes that were required for survival during ancient cycles of feast and famine, but that now contribute to the disease in a modern world of more fatty and sugary diets.

A newly published analysis of fossilized feces from the American Southwest, however, suggests this “thrifty gene” may not have developed because of how often ancient Natives ate. Instead, researchers said, the connection may have come from precisely what they ate.

The research, which appears in the latest edition of the journal *Current Anthropology*, suggests that the prehistoric hunter-gatherer civilizations of the Southwest lived on a diet

very high in fiber, very low in fat and dominated by foods extremely low on the glycemic index, a measure of effects food has on blood sugar levels. This diet, researchers said, could have been sufficient to give rise to the fast-storing “thrifty genes.”

“What we’re saying is we don’t really need to look to feast or famine as a basis for (the genes),” said Karl Reinhard, professor of forensic sciences at UNL’s School of Natural Resources and the study’s lead author. “The feast-or-famine scenario long hypothesized to be the pressure for ‘thrifty genes’ isn’t necessary, given the dietary evidence we’ve found.”

Natives have some of the highest rates of Type 2 diabetes of any group and are more than twice as likely to develop the disease as are Caucasians. The notion the gene’s origin goes back to feast-and-famine cycles among prehistoric hunter-gatherer ancestors has been discussed for nearly a half-century.

To fully understand the basis of the high rates, Reinhard said, “one has to look at the

best dietary data one can find. That comes from coprolites (the official term for fossilized feces). By looking at coprolites, we’re seeing exactly what people ate.”

The coprolites are from Antelope Cave, a deep cavern in northern Arizona where, over several thousands of years, was home to various cultures. That includes the ancestral Puebloan peoples, who are believed to have lived there seasonally for at least 450 years.

Reinhard and Keith Johnson, an archeologist at California State University, Chico, studied 20 coprolites found in the cave and combined that information with analysis from other sites for hints of ancient Natives’ diets. They found clues to a food regimen dominated by maize and high-fiber seed from sunflowers, wild grasses, pigweed and amaranth.

Prickly pear, a desert succulent, was also found repeatedly in the samples. By volume, about three-quarters of the Antelope Cave coprolites were made up of insoluble fiber. The foods also were low on the glycemic

index; some research suggests that high-GI foods may increase risk of obesity and diabetes.

The analysts’ findings led them to deduce that the nature of the feast, and not necessarily its frequency, was enough to lock the “thrifty” genes in place — and leave modern Natives more susceptible to diabetes as their diets evolved to lower-fiber, higher-GI foods.

“These were not just famine foods,” the authors wrote. “These were the foods eaten on a day-by-day basis during all seasons in both feast and famine. They continued to be eaten even after agriculture was developed. Antelope Cave coprolites show that this high-fiber diet was eaten during the warmer seasons of food abundance.”

In addition to UNL’s Reinhard and California State Chico’s Johnson, the study was authored by Isabel Teixeira-Santos and Monica Viera of the Escola Nacional de Saude Publica in Rio de Janeiro, Brazil.

Physics team assists in hunt for Higgs boson

Physicists at CERN laboratory in Switzerland announced July 4 that they have observed a new particle whose characteristics match the long-theorized Higgs boson particle, the central part of a hypothesis that could peel away the very fabric of the universe and influence the understanding of all matter.

For UNL’s experimental high-energy physics team, the announcement was a significant moment in their group’s decades-long collaboration in the hunt for the elusive subatomic particle, which has been dubbed by some observers as the “God Particle.”

The Higgs boson could explain why some particles have mass and others do not, said Gregory Snow, professor of physics and astronomy. CERN’s atom-smashing Large Hadron Collider has been generating high-energy collisions of protons in its search for the final piece of the theoretical framework, which is known as the Standard Model of particles and forces.

Without the Higgs boson, however, the Standard Model cannot explain how most of these particles acquire their mass, a key ingredient in the formation of the universe.

“We now have firm, statistical-

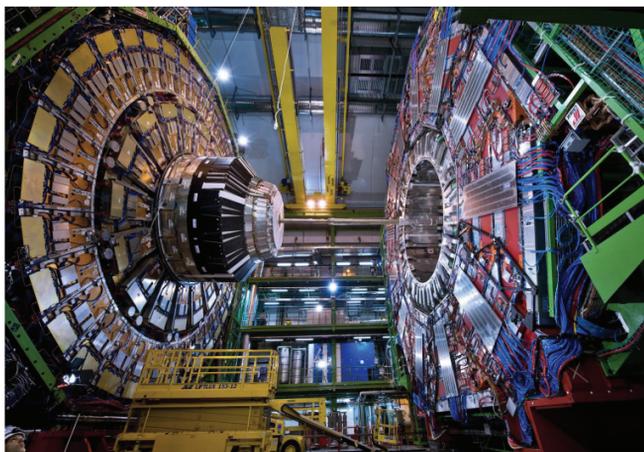


Photo from inside the CERN laboratory in Switzerland. UNL’s experimental high energy physics team is helping with the international effort to find the Higgs boson particle.

ly significant evidence that we’ve observed a new particle – a particle that has a mass that is consistent with what we have expected to see with the Higgs boson,” said Snow, founding member of UNL’s experimental high-energy physics team that has aided in the Higgs search since 1993.

The results are labeled preliminary and are based on data collected in 2011 and 2012, with the

2012 data still under analysis.

UNL’s experimental high-energy physics team also includes faculty members Ken Bloom, Dan Claes, Aaron Dominguez and Ilya Kravchenko, and several other researchers working in Lincoln, at CERN in Switzerland and at the Fermi National Accelerator Laboratory in Batavia, Ill.

<http://go.unl.edu/aa9>

Research to power brain injury diagnostic device

A handheld tool is under development to diagnose traumatic brain injury on the spot using technology developed by a UNL chemist. Such a device could yield critical and in some cases life-saving information to guide triage decisions from the battlefield to the football field.

SFC Fluidics, a Fayetteville, Ark.-based biotechnology company, recently entered into a license

agreement with UNL’s nonprofit affiliate, NUtech Ventures, to use technology developed by David Hage, professor of chemistry. NUtech is responsible for building partnerships between the University of Nebraska and the private sector.

Hage, a bioanalytical chemist, develops methods to separate and measure specific compounds in complex fluids, and in some

cases to do so quite rapidly. In applications seeking to assess the severity of a traumatic brain injury, his methods can measure specific proteins in blood serum that are released by the brain. In other words, the severity of brain injury can be diagnosed with a simple blood test.

<http://go.unl.edu/xpe>

NANOTUBE

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still under study.”

Zeng’s research group at UNL used the Holland Computing Center with funding from the National Science Foundation and the Nebraska Research Initiative to perform computations investigating the structure of the tubes. His group determined the size of the rings and the distance between them to find the structure of the devices, and found eight possible ways to stack the molecules. Crucially, computations also showed that the structures are stable at room temperature.

Bing Gong, professor of chemistry at the University at Buffalo and Beijing Normal University, a long-time collaborator of Zeng’s, and

Zhifeng Shao, executive dean of the Center for System Biomedicine at Shanghai Jiao Tong University and a former long-time faculty member at the University of Virginia School of Medicine, and their teams, synthesized the nanotubes and measured the ion flow, completing a three-year project funded in large part by the NSF. X-ray work was done at the Advanced Photon Source at Argonne National Laboratory in Argonne, Ill. Zeng’s research group at UNL includes postdoctoral fellows Hui Li and Yi Gao.

The success of the experiments, Zeng said, will lead to continuing research and development.

“One thing people are interested in in this field is desalination. Another is drug delivery,” he said. “In the future, our direction, also

supported by NSF, is to functionalize the inner wall of the tube.

“For now, at least, it’s a very intriguing nanotube because it has what we call selective ion transport, which is very special. Only potassium can go in. It goes through and the sodium can not. But, hopefully, if we can add a different function inside, and then sometimes we can allow only water to go through, or some other ions to go through, we can add more selectivities.”

The findings were reported in the July 17 issue of *Nature Communications*.

It’s the ninth time in 11 years that research from Zeng’s lab has been published in one of the four highest-impact interdisciplinary journals, *Nature*, *Science*, the *Proceedings of the National Academy of Sciences* and *Nature Communications*.

For more information about the Drone Journalism Lab, go to <http://www.dronejournalism.org>

of the ground below. When it landed — in a precise, preprogrammed location, the pilot removed a memory card and a computer was used to stitch all the individual photos into one high-resolution image of the ground.

“My brain just exploded right then and there,” said Waite. “I realized this was the answer, this was how reporters could get into the air and cover disasters and other news events.”

Waite attempted to buy one of the planes, but was grounded by the \$65,000 price tag and because the use of drones for commercial uses such as journalism is illegal in the United States. He has since overcome the cost issue, opting for a less expensive model and now gearing up with the Knight Foundation grant. The legal issues are also being played out as the Federal Aviation Administration plans to integrate commercial UAVs into the national

air space by September 2015.

And while the new federal regulations are being created, the Drone Journalism Lab will also be at work to showcase how UAVs can be used to gather news.

The research, from building flying platforms to crafting ethical guidelines, will include the work of UCARE students Ben Kreimer, a senior journalism major; Travis Shafer, a junior journalism major; and Daniel Wheaton, a freshman broadcasting major.

Involving undergraduates in the research excites Waite.

“UCARE is great because it allows me to expose students to this project without forcing it into a curriculum,” Waite said. “My hope is to get others interested and have them just come hang out. I’m excited to see what we can do in an informal learning environment.”

He also can’t wait to see the ideas that spring from the research.

“These UAVs have all kinds of potential,” said Waite. “The really fun part is we’re just starting to think about it.”

Kids with behavior issues, disabilities are bullied more, bully others more

Students receiving special-education services for behavioral disorders and those with more obvious disabilities are more likely to be bullied than their general-education counterparts — and are also more likely to bully other students, a new study shows.

The findings, published in the *Journal of School Psychology*, highlight the complexity of bullying’s nature and the challenges in addressing the problem, said lead author Susan Swearer, professor of school psychology at UNL.

“These results paint a fairly bleak picture for students with disabilities in terms of bullying, victimization and disciplinary actions,” wrote Swearer, a national

expert on school bullying who has consulted with both the White House and Lady Gaga’s Born

This Way Foundation on anti-bullying initiatives. “Sadly, these are the students who most need to display prosocial behavior and receive support from their peers.”

The research followed more than 800 special-ed and general-ed students between the ages of 9 and 16 at nine different elementary, middle and high schools over time. More than a third — 38.1 percent — said they had bullied other students. At the same time, 67 percent said bullies had victimized them.

<http://go.unl.edu/4tg>



Swearer

Extension creates online drought resource

UNL Extension has created a new website that offers resources from the Institute of Agriculture and Natural Resources and others for dealing with drought in the region.

The new site includes links to information on crops, livestock, economics, water, families, and home and garden. It will include the latest weather forecasts from state climatologist Al Dutcher, as well as links to such ongoing programming as “Market Journal,” *CropWatch* and “Backyard Farmer,” UNL Extension publications; UNL news releases; and links to a number of key resources outside the university.



Access the site at <http://go.unl.edu/pn4>

PARTNERSHIP

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AQUASTAT, FAO’s global information system on water and agriculture.

- Improving drought management and climate adaptation through drought monitoring programs, development of risk-based drought preparedness strategies and policies, and stronger drought warning systems to better cope with water scarcity in a changing climate.

- Improving sustainable production under drought, stress and water-limited conditions through plant breeding, agronomic practices, crop physiology, biotechnology and molecular biology.

Initial activities will include

regular information exchanges, joint research projects and joint workshops, conferences and symposia that will complement FAO’s frequent global meetings on water, food and agriculture and NU’s annual Water for Food Conference. The university and FAO will develop annual workplans that outline more specific activities.

FAO works to achieve global food security so that people have access to enough high-quality food to lead active, healthy lives. In both developed and developing countries, FAO helps to raise levels of nutrition, improve agricultural productivity, improve the quality of life in rural populations, and contribute to global economic growth.

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