March, 2014

Read stories this month in these UNH research areas:

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Engineering & Physical Sciences

Health, Behavioral & Social Sciences

Humanities & the Arts

Marine & Ocean Sciences

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Sustainability & the Environment

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Agriculture & Biosciences

Dial 11 Digits, Get 1,000 Answers

UNH Cooperative Extension’s Master Gardener program provides answers for New Hampshire residents experiencing challenges with plants, pests, and livestock. The program, which began in 1993 to accommodate the steady calls from citizens in need of one-on-one assistance, now boasts a team of 190 highly trained active volunteers. In addition to answering questions from the public, the Master Gardeners hold programs at nursing homes, assist communities with specific horticultural endeavors such as butterfly habitats, and organize symposia with guest speakers. Those in need of assistance may call 1-877-EXT-GROW Monday through Friday from 9 a.m. to 2 p.m. or e-mail answers@unh.edu.

http://extension.unh.edu/articles/Dial-11-Digits-Get-1000-Answers

Emerald Ash Borer Workshops Help Landscapers, Foresters, and Property Managers

UNH Cooperative Extension field specialists Amy Papineau and Tim Fleury organized a series of workshops in Portsmouth and Concord for landscapers, foresters, and property managers who may be affected by the emerald ash borer (EAB). This invasive species was discovered to have infected ash trees in New Hampshire during March of 2013. Papineau explained, “We wanted to bring the landscapers together and give them the information they need to answer their clients’ questions and make the appropriate management decisions regarding the ash trees on the properties they manage.”


Growing a Solution

Iago Hale, assistant professor of specialty crop improvement in UNH’s College of Life Sciences and Agriculture, is a central member of a teaching team in an international effort to improve plant breeding in sub-Saharan Africa. The African Plant Breeding Academy was established to combat hunger across Africa by bringing plant breeders together to discuss new approaches that will improve the breeding of “orphan crops.” Orphan crops offer great nutritional benefits but previously have been ignored by researchers, who have instead focused on improving cash crops for exports.

http://www.unh.edu/unhtoday/veterans/growing-solution
Invaders from the East

UNH Cooperative Extension’s fruit and vegetable team is making great strides in combating the Spotted Wing Drosophila, an invasive fruit fly species from China that has plagued New Hampshire berry growers since the species’ introduction in 2011. Working alongside farmers and other research teams from across New England, Cooperative Extension has introduced a series of responses intended to monitor, identify, and control the pest while protecting crops. The team’s efforts have already cut losses from 25 percent in 2012 to just over 5 percent in 2013, saving growers an estimated $1 million.

http://extension.unh.edu/articles/Invaders-East

Business & Technology

High School Students Explore Computing and Engineering at Girls Technology Day

Mihaela Sabin, associate professor and coordinator of the Computing Technology Program at UNH Manchester, organized a one-day event with her colleagues to introduce middle school and high school girls to the opportunities of careers in technology. Girls Technology Day activities, which were designed to dispel the idea that careers in computer science lack social interaction, included a series of workshop sessions that emphasized collaboration and hands-on activities. Sabin stressed the importance of having women work in technology fields: “Nobody disputes that the more diverse a high-tech team, the more successful and impactful the solution is.”

Samantha and Malen, first year students at Pinkerton Academy, work with UNH Manchester Professor Mihaela Sabin to develop a mobile app.

http://manchester.unh.edu/blog/campus-news/high-school-students-explore-computing-and-engineering-girls-technology-day

Students and Alumnus Engineer a Device to Measure Snow Loads on Roofs

UNH Manchester students and faculty from the new Emerging Technology Lab have teamed up with Chris Dundorf, founder and president of 2KR Systems LLC in Barrington, NH, to develop a device to monitor the potentially dangerous snow loads on large building rooftops. The collaboration has allowed Dundorf, a 2002 graduate of UNH’s civil engineering program, access to the state-of-the-art resources at UNH Manchester while allowing students hands-on, real-world experience in the field. The final product will be marketed to businesses and communities in regions with high snowfall.

http://manchester.unh.edu/blog/campus-news/students-and-alumnus-engineer-device-measure-snow-loads-roofs
Texas Instrument Grant Boosts UNH Manchester’s Engineering Technology Program
UNH Manchester has received a grant of $12,000 and engineering equipment worth nearly $3,000 from Texas Instruments Incorporated. The award will enable UNH Manchester’s Engineering Technology program to be admitted to the Cadence World Wide University Software Program, which provides students with access to the microelectronic industry’s world-class design software. All juniors and seniors in the Engineering Technology program will engage in hands-on projects using these new Engineering Lab resources.

http://manchester.unh.edu/blog/campus-news/texas-instrument-grant-boosts-unh-Manchester-s-engineering-technology-program

UNH: LESI Continues to Slide as Future Outlook, Reservations Drop
The UNH Lodging Executives Sentiment Index (LESI) survey is a monthly measure of the current business conditions and concerns of executives throughout the lodging industry. February 2014’s LESI has predicted an uncertain economic future which may foreshadow financial impacts to other industries as well. Nelson Barber, associate professor of hospitality management in UNH’s Peter T. Paul College of Business and Economics and manager of the LESI, explained: “Executive sentiment for general business conditions 12 months from now have weakened, supported by a less than positive view of future reservations and non-managerial employment.”

http://www.unh.edu/news/releases/2014/03/lw26lesi.cfm
http://www.unh.edu/campusjournal/2014/03/unh-lesi-continues-slide-future-outlook-reservations-drop

UNHInnovation Receives Grant to Support Entrepreneurship Opportunities
UNHInnovation (UNHI) received an 18-month grant from the National Collegiate Inventors and Innovators Alliance to develop a new course, Managing Innovation, which will focus on promoting UNH’s intellectual property (IP), creating relationships between UNH and the business community, and fostering entrepreneurship. Marc Sedam, executive director of UNHI, will teach the new course. In the words of Tim Willis, licensing manager and grant development specialist for UNHI, “UNH is committed to improving its entrepreneurial ecosystem across undergraduate programs and we saw this grant as a great opportunity to educate students on how to work with IP assets to create ideas and companies that improve productivity in the 21st century.” UNHI is a unit of the UNH Research Office and was known as the Office for Research Partnerships and Commercialization until its restructuring in October 2013.

http://www.unh.edu/news/releases/2014/03/cd06innovation.cfm
http://www.unh.edu/campusjournal/2014/03/unhinnovation-receives-grant-support-entrepreneurship-opportunities

Engineering & Physical Sciences

FIRST Class: UNH Hosts Teens and Their Robots at Regional Competition
On March 6-7, UNH hosted a regional FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition, a contest testing the robots that teams of high school students have built in six weeks from a common set of parts to accomplish the contest’s challenge. Founded by Dean Kamen, president of Manchester’s DEKA Research & Development, FIRST focuses on applying engineering principles, collaboration, and gracious professionalism – a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. The result: both fierce competition and mutual gain. The event was coordinated and judged by UNH faculty, graduate students, and undergrads, several of whom were former competition participants. The teams and mentors also toured UNH’s engineering facilities and engaged in “meet-and-greet” sessions with UNH researchers and students.

http://www.unh.edu/campusjournal/2014/03/first-class-unh-hosts-teens-and-their-robots-regional-competition
Hackers Beware - Cyber Defense Competition Brings Region’s Brightest to UNH

In March, UNH’s computer science department hosted the seventh annual Northeast Collegiate Cyber Defense Competition, a contest challenging student teams from several universities to compete in a series of activities designed to test cyber defense skills in the context of real-world, contemporary challenges. The event also featured a keynote address from Brigadier General Ronald M. Bouchard ’77, senior vice president of NCI Information Systems, a company that works closely with U.S. government agencies on cyber security. Said Greg Hilston ’15, president of UNH Cyber Security Club Wildhats, hosting the competition is an opportunity to demonstrate that UNH is “serious and invested in excelling in the area of cyber security.”

http://www.unh.edu/unhtoday/hackers-beware
http://www.unh.edu/news/releases/2014/03/bp04cyberdefense.cfm
http://www.unh.edu/campusjournal/2014/03/unh-hosts-cyber-defense-competition-march-14-%E2%80%93-16

STEM Discovery Lab Looks to Program Expansion

The STEM (Science, Technology, Engineering, and Mathematics) Discovery Lab at UNH Manchester is planning to expand its curriculum for K-12 students. With start-up assistance from UNH Durham, UNH Cooperative Extension, and the Granite United Way, the STEM Discovery Lab has completed a successful pilot year featuring hands-on, dynamic programs for students in a wide variety of STEM disciplines. Expansion plans include the hiring of a full-time STEM Discovery Lab Director to lead efforts to start providing courses in all of the STEM disciplines that would help prepare the students to be part of a well-educated local workforce.

http://manchester.unh.edu/blog/unh-stem-discovery-lab/stem-discovery-lab-looks-program-expansion

Health, Behavioral & Social Sciences

2014 Carsey Summer Scholars Named

The proposed Carsey School of Public Policy has announced the first recipients of awards from its Summer Scholars program, which will provide financial support to researchers working on projects in social work, sustainability, and civic engagement that will yield results that can be reported in both a peer-reviewed and an applied research publication. The 2014 Carsey Summer Scholars and their projects are: Reagan Baughman, associate professor of economics, for “The Impact of Economic Conditions on Utilization of Long-term Care;” Cliff Brown, associate professor of sociology, for “Mobilization in Defense of Local Water Resources;” Katie Edwards, assistant professor of psychology and women’s studies, for “Dating and Sexual Violence Among New Hampshire Youth;” Rebecca Glauber, assistant professor of sociology, for “The Economic Effects of Caring for Elderly Family Members;” Mary Malone, associate professor of political science, for “Learning to Protect and Serve in Latin America;” and Alison Watts, research assistant professor of the civil engineering/environmental research group, for “Water Quality Permits and the Great Bay.”

http://www.unh.edu/campusjournal/2014/03/2014-carsey-summer-scholars-named

Carsey Institute: Granite Staters in More ‘Walkable’ Neighborhoods Have Higher Levels of Trust, Community Involvement

Researchers from the Carsey Institute at UNH have found that New Hampshire residents living in “walkable” neighborhoods report a higher quality of life and community involvement. A brief reporting the research results, titled “Walking Builds Community Cohesion: Survey of Two New Hampshire Communities Looks at Social Capital and Walkability,” was co-authored by UNH’s Kevin Gardner with colleagues from Plymouth State University and New
England College. Gardner is a professor of civil engineering, senior fellow at the Carsey Institute at UNH, member of the UNH Environmental Research Group, and associate director of the NH EPSCoR program. The researchers concluded that fostering municipal efforts to increase walkability could improve community development throughout the state.

http://www.unh.edu/news/releases/2014/03/lw11carsey.cfm
http://www.unh.edu/campusjournal/2014/03/carsey-institute-granite-staters-more-%E2%80%98walkable%E2%80%99-neighborhoods-have-higher-levels-trust-comm

Carsey Institute: More Than 40 Percent of LGBTQ+ College Students Report Intimate Partner Violence

Research conducted at the Carsey Institute at UNH has shown that more than 40 percent of college students identifying as LGBTQ+ (Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, and other nonheterosexual identities) experience intimate partner violence, a number that correlates with the rate reported by students identifying as heterosexual. A brief reporting the research results, titled “Intimate Partner Violence Among LGBTQ+ Students,” was authored by Katie Edwards, assistant professor of psychology and women’s studies and faculty fellow at the Carsey Institute at UNH, and by Kateryna Sylaska, a doctoral student in social psychology. The study results will help experts design prevention and intervention efforts that meet the specific needs of LGBTQ+ college students.

http://www.unh.edu/news/releases/2014/03/lw25carsey.cfm
http://www.unh.edu/campusjournal/2014/03/carsey-institute-more-40-percent-lgbtq-college-students-report-intimate-partner-violence

Catholic Scholar Available to Comment on Pope Francis’s First Year

Michele Dillon, professor of sociology and a scholar of Catholicism, has released a statement and is available to comment on Pope Francis’ first year in the papacy. Dillon’s statement describes her studies of the reactions and opinions of self-identifying liberal, moderate, and conservative Catholics and explores Pope Francis’ attitudes toward controversial issues such as sexuality, abortion, and economic inequality.

http://www.unh.edu/news/releases/2014/03/lw05catholic.cfm

Flight of Ingenuity

Therese Willkomm, clinical professor of occupational therapy, traveled to India with graduate students Emily Hames and Vanessa Tocco to host workshops on creating products to improve the lives of people with disabilities. Using inexpensive, readily available materials, Willkomm, known as the “MacGyver of assistive technology,” worked with more than 1,000 engineering students and faculty from three Indian universities to create prototypes and share ideas. Said Willkomm, “Our hope is to produce a book of all the solutions that students developed using material found in India.”

http://www.chhs.unh.edu/khl/2014-03/flight-ingenuity

Professor's Article Named One of 75 Most Influential in Public Administration Review

Political science professor Melvin Dubnick's article, "Accountability in the Public Sector: Lessons from the Challenger Tragedy," published in 1987, has been selected as one of the 75 most influential articles appearing in the Public Administration Review (PAR) since its inception in 1940. More than 3500 articles have appeared in PAR to date. Dubnick

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is the author of numerous works on government accountability, administrative ethics, government regulation, and civic education as well as the co-author of textbooks on American government, public administration, and policy analysis.

http://cola.unh.edu/article/2014/03/professors-article-named-one-75-most-influential-public-administration-review

The Scholar & the Sailor

http://cola.unh.edu/article/2014/03/scholar-sailor

Two UNH Professors Receive Prestigious Fulbright Awards
UNH faculty members J. William Harris, professor of history, and Tom Stafford, associate professor of sociology, have received prestigious Fulbright Awards to support their international scholarship. Harris was named the Fulbright Distinguished Research Chair at the Roosevelt Study Center in the Netherlands to complete his one-volume study of the American South which examines events in the period from the aftermath of the Civil War to post-segregation. Safford accepted a Fulbright Scholar award to conduct research on the many factors that impact contemporary coastal development in Brazil. Ken Fuld, dean of the UNH College of Liberal Arts, stated, “As gratified as I am to know these two will be taking their skills to the international stage, I am equally pleased knowing they will return to UNH with new perspectives that will enhance their teaching and scholarship.”

http://www.unh.edu/news/releases/2014/03/lw04fulbright.cfm
http://cola.unh.edu/article/2014/03/two-unh-professors-receive-prestigious-fulbright-awards

UNH Database Aids Healthcare Decision Making
The Accountable Care Project, a program managed by the NH Citizens Health Initiative that is staffed by the UNH-based Institute for Healthy Policy and Practice (IHPP), is developing an interactive system for sharing information from the state’s all-payer claims database and from electronic medical records. Rather than receiving a standard report, participating organizations—including hospitals and physicians’ groups—can now delve into the data themselves to assess how they’re doing compared to others in New Hampshire on measures related to cost, quality and use. The project’s goal is to provide easy access to the information that providers need to guide their healthcare reform efforts as they seek to provide better care for New Hampshire residents while containing spending.

http://www.chhs.unh.edu/khl/2014-03/unh-database-aids-healthcare-decision-making

UNH Research: Children Benefit from High Quality Violence Prevention Programs
Researchers from the UNH Crimes Against Children Research Center (CCRC) have found that children benefit from high-quality prevention programs aimed at decreasing bullying and violence. Children aged 5 to 9 years who had received high-quality prevention education had lower levels of both peer victimization and perpetration. Education was also associated with more disclosure to authorities. The full report, “Youth Exposure to Violence Prevention Programs in a National Sample,” will be published in the April 2014 issue of the *Journal of Child Abuse and Neglect*. The study, the
National Survey of Children Exposed to Violence, was funded by the U.S. Department of Justice, and was conducted through interviews with a representative sample of parents and children in 4500 families nationwide.

http://www.unh.edu/news/releases/2014/03/lw27finkelhor.cfm

UNH Research: Positive Memories of Exercise Spur Future Workouts
UNH researchers David Pillemer, the Dr. Samuel E. Paul Professor of Developmental Psychology, and Mathew Biondolillo, doctoral student of psychology, have found that recalling positive memories of exercise experiences can inspire people to adopt healthier lifestyles that include physical activity. The study, “Using Memories to Motivate Future Behavior: An Experimental Exercise Intervention,” was published in February in the academic journal Memory. It is the first study to explore how positive memories can influence future workouts.

http://www.unh.edu/news/releases/2014/03/lw17memory.cfm
http://www.unh.edu/campusjournal/2014/03/unh-research-positive-memories-exercise-spur-future-workouts

Humanities & the Arts

Charles Simic, Professor Emeritus of English, Wins the 2014 Zbigniew Herbert International Literary Award
Charles Simic, distinguished poet, essayist, translator, and emeritus UNH professor of English, has been awarded the Zbigniew Herbert International Literary Award. The award recognizes outstanding artistic and intellectual literary achievements which uphold the values of Polish poet Zbigniew Herbert’s work. A seven-member international jury composed of poets, essayists, translators and publishers selects the recipient.

http://cola.unh.edu/article/2014/03/zbigniew-award

Classics Professor Publishes Anthology of Ancient Rome Sources
R. Scott Smith, associate professor of classics, and colleague Christopher Francese of Dickinson College have produced an edited and translated volume of writings by twenty three ancient Roman authors. The anthology includes history, satire, philosophy, poetry, biography, and letters that cover a full range of topics in ancient Roman life. One reviewer described it as “an impressive and well-chosen selection of key sources for the study of ancient Rome, rendered into lively and engaging English,” and recommended the anthology enthusiastically.

http://cola.unh.edu/article/2014/03/ancient-rome

English Professor to Deliver Lindberg Lecture April 17
Rochelle Lieber, professor of English and linguistics and recipient of the 2013 UNH Lindberg Award, delivered the Lindberg Lecture on April 17, 2014. The lecture, titled “Confessions of a Morphologist or How I Learned to Stop Intuiting and Love Data,” explored Lieber’s internationally-acclaimed work in the field of morphology, a branch of linguistics that focuses on the form and formation of words. Lieber has been a key scholar in the resurgence and development of the field in the United States.

http://cola.unh.edu/article/2014/03/english-professor-deliver-lindberg-lecture-april-17
http://www.unh.edu/campusjournal/2014/03/english-professor-deliver-lindberg-lecture-april-17
Professor Publishes Book on Surveillance in Asian North American Literature

A book by English professor Monica Chiu, titled “Scrutinized!: Surveillance in Asian North American Literature,” has been published as part of the University of Hawaii series, Asian and Pacific American Transcultural Studies. In the book, Chiu reveals how the fascination with mystery, detection, spying and surveillance seen in Asian North American novels published between 1995 and 2010 is a literary response to anxieties over race. According to Chiu, this is evidence of a state of unease during a time of racial scrutiny. Chiu teaches Asian American studies and American literature at UNH.

http://cola.unh.edu/article/2014/03/surveillance

Professor, Alum Win NH Literary Awards

The New Hampshire Writers Project has chosen Andrew Merton’s book Evidence That We Are Descended from Chairs (Accents Publishing, 2012) as the Outstanding Book of Poetry for 2013. Merton is professor and chairperson of UNH’s English department. Tim Horvath, an alumnus of the Masters of Fine Arts in Writing program, was recognized with the Outstanding Work of Fiction award for his collection of short fiction, Understories (Bellevue Literary Press, 2012). The award ceremony took place on March 22, 2014 during Writers’ Day, the largest New Hampshire writing conference, which attracts bestselling authors, award winners, laureates, professional writers, editors, agents, and publishers for workshops, seminars, manuscript critiques and agent/publisher one-on-one pitch sessions.

http://cola.unh.edu/article/2014/03/professor-alum-win-nh-literary-awards

Marine & Ocean Sciences

Research Makes a Difference

A team of researchers from UNH and Plymouth State University studied the greater ecological effects of harvesting blue blood from horseshoe crabs with the support of funds from New Hampshire Sea Grant. The stress of capture, transport, and the loss of its blue blood, which is used to keep biomedical vaccines clear from bacterial contamination, has been found to leave horseshoe crabs disoriented during their breeding season. Based on their findings, the team advocates for an improved approach to crab containment conditions and suggests that the time of harvest be changed to after the breeding season to help ensure the sustainability of this important organism. The study results were published in the December 2013 issue of The Biological Bulletin and featured on the issue’s cover.

http://www.unh.edu/unhtoday/veterans/2014/03/research-makes-difference

Space Science

Scientists Using UNH Detector Illuminate Cause of Sun’s “Perfect Storm”

Noé Lugaz, Charles Farrugia, and Antoinette Galvin, researchers in UNH’s Space Science Center within the Institute for the Study of Earth, Oceans, and Space, are members of an international team of scientists studying the extreme weather storm that occurred on the Sun on July 22, 2012. A UNH-designed instrument on board NASA’s twin-satellite Solar Terrestrial Relations Observatory (STEREO) mission made new, essential measurements of this rare, powerful storm event triggered by
two successive solar eruptions known as coronal mass ejections (CMEs). The goal of the STEREO mission is to gain a better understanding of what causes these space storms to form and evolve in order to prevent potential damage the storms may cause to technological systems such as satellites and ground-based electricity grids.

http://www.unh.edu/news/releases/2014/03/ds18storm.cfm
http://www.unh.edu/campusjournal/2014/03/scientists-using-unh-detector-illuminate-cause-sun%E2%80%99s%E2%80%99%E2%80%99Cperfect-storm%E2%80%99D

Sustainability & the Environment

Expert Available to Comment on Exxon Valdez 25th Anniversary

Nancy Kinner, professor of civil and environmental engineering and director of UNH’s Center for Spills in the Environment, is available to comment on the 25th anniversary of the ecologically devastating Exxon Valdez oil spill. Kinner, a leading independent expert on the fate of spilled oil, has worked closely with media outlets and has testified before federal lawmakers concerning major events such as the Exxon Valdez and BP Deepwater Horizon oil spills. She also has taken a leadership role in creating and sharing scientific knowledge in support of clean-up efforts with spill responders, scientists, and other stakeholders in the Gulf of Mexico spill region. In October, UNH will host a comprehensive two-day forum to explore the past, present, and future of these types of accidents, titled “Oil Spill Response 25 Years After Exxon Valdez and in the Wake of Macondo 252: What Have We Learned and What Are We Missing?”

http://www.unh.edu/news/releases/2014/03/bp25valdez.cfm

Survival, a Fish Story

Daniel Zotos ’14, a political science and international affairs major at UNH, spent the summer of 2013 traveling in Spain to research the almost-mythical Atlantic bluefin tuna and the depletion of fisheries in the Atlantic. With the support of a grant from the Hamel Center for Undergraduate Research, Zotos conducted his research under the supervision of Jeffrey Bolster, associate professor of history at UNH. Together they made contacts with conservationists, government officials, and fishermen in Spain to allow Zotos to examine the practices and policies of bluefin tuna fisheries along the coast of Spain. After many visits and interviews, Zotos was introduced to a traditional fishing method that he believes could help improve and sustain tuna fisheries if adopted more broadly.

http://cola.unh.edu/thecollegeletter/2014-03/survival-fish-story

UNH, Extension Researchers Find a New Lens for Measuring the Health of Lakes Worldwide

Working with a team of international collaborators, Shane Bradt, UNH Cooperative Extension associate professor and specialist of geospatial technologies, and Tim Moore, research scientist in the Ocean Process Analysis Laboratory at UNH’s Institute for the Study of Earth, Oceans, and Space, have contributed to the creation of a new method for measuring the health of lakes. Using light profiles derived from data gathered through remote satellite technology, the team developed an internationally-applicable, original technique for estimating chlorophyll levels, an indicator of lake measuring the health of lakes. Using light profiles derived from data gathered through remote satellite technology, the
team developed an internationally-applicable, original technique for estimating chlorophyll levels, an indicator of lake health that was previously determined through laborious, time-consuming physical sampling. The team was able to articulate seven distinct optical lake type models. With imagery from any lake, a researcher can now make a match to one of the seven types, which can then be used to turn a satellite image into a chlorophyll “map.” The method even allows different areas of a lake (for example, shallow areas or deep holes) to belong to more than one of the seven types.


Cooperative Extension’s Shane Bradt measures light profiles on the Great Salt Lake during a winter data collection cruise. Credit: UNH Cooperative Extension

An example of how separate images are combined to create a complete map of the chlorophyll concentration (Chl mg/m³) of a lake. Credit: Elsevier Inc.

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http://www.unh.edu/research/UNH-Research-Digest