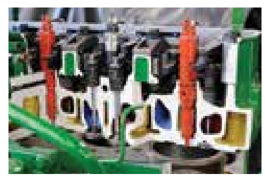
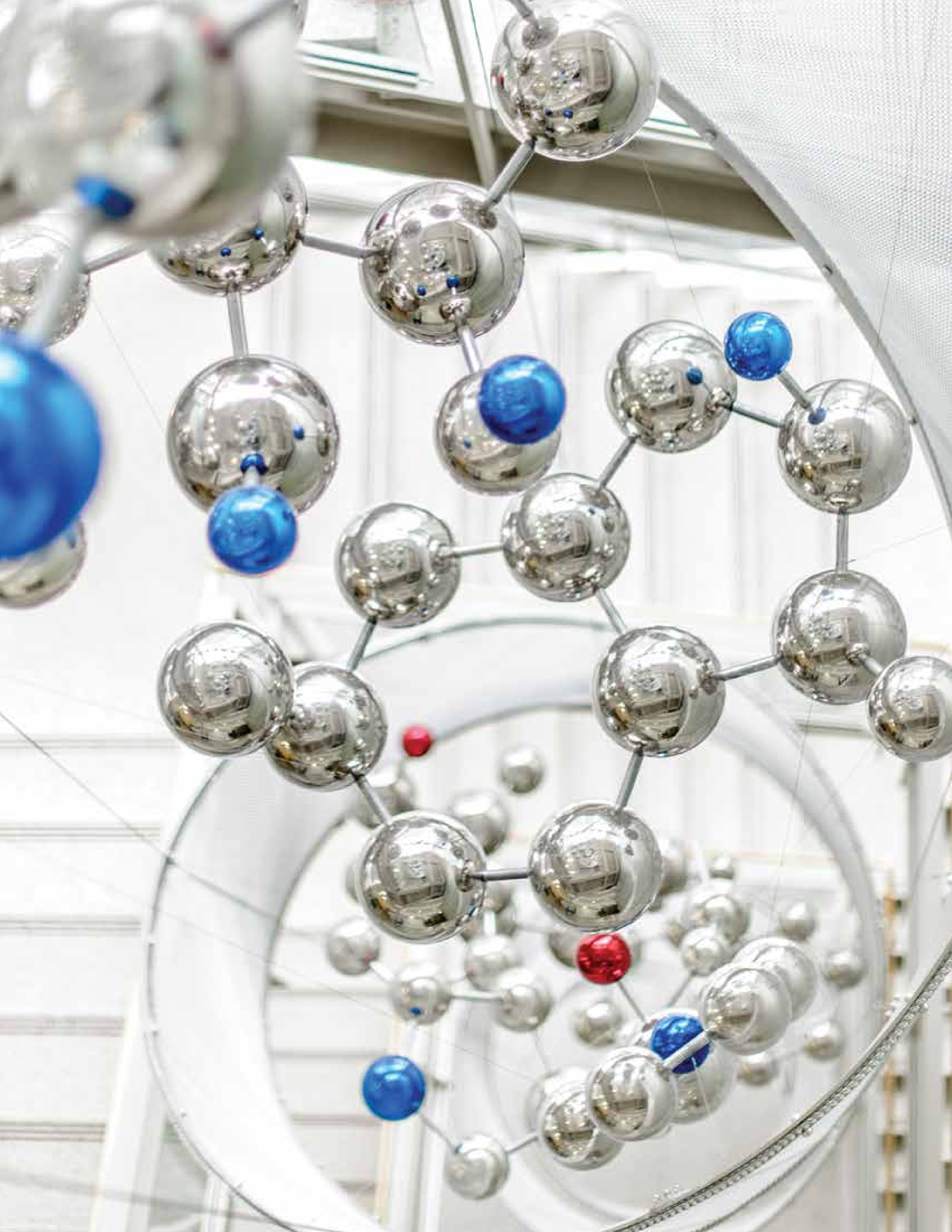
University of Wisconsin–Madison
Federal Research Highlights and Impacts 2017






WISCONSIN
UNIVERSITY OF WISCONSIN–MADISON



University of Wisconsin–Madison Federal Research Highlights and Impacts 2017

Since opening our doors in 1849, the University of Wisconsin–Madison campus has guided students to think critically in their search for knowledge. UW–Madison is the flagship university of the UW System, and we are among the most prolific research institutions in the world. Every day, our students receive instruction from world-class faculty members and solve real-world problems. And with the Wisconsin Idea as our guiding principle, we're not only changing the 936 acres we call home—Badgers are also creating a better future for Wisconsin, the nation, and the world. We are continually moving forward in our goal to make a positive and lasting impact through all our initiatives.

As a global leader in research, it is imperative that we continue to find new and better ways to do things. In an ever-changing environment, we need to meet today's challenges and advance the opportunities of tomorrow. One of our guiding principles is to contribute to improving lives around the world and providing solutions for the global problems our society faces. Through the support of our alumni and friends, UW–Madison is a consistent leader in cutting-edge research breakthroughs.

The federal government plays an important role in our research investment. This brochure provides highlights of just some of the countless ways UW–Madison researchers leverage their federal investment every day to solve pressing problems, improve and enhance health outcomes, provide individual enrichment, grow the economy, and strengthen our nation's security. However, our advancements may slow if our country does not continue to support research and invest in higher education that fuels innovative ideas and economic prosperity for decades to come.

In the pages that follow, you will learn about some of the ways UW–Madison research is making a difference—from the Medical Sciences Center on campus, all the way to the South Pole. All of us at UW–Madison are committed to this vision of advancing science and improving lives for everyone, and we know that because of our advancements to date our most innovative years lie ahead. Through the ongoing support of leaders across the nation, we can go on delivering the solutions that have and will continue to make a meaningful impact for people at home and throughout the world.

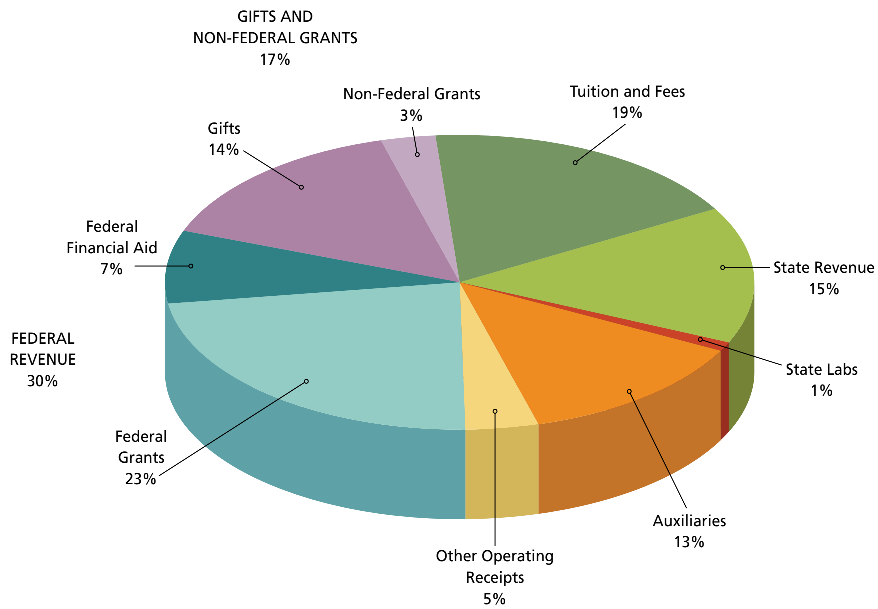
We encourage you to contact the Office of Research and Graduate Education or the Office of Federal Relations with questions or requests for additional information about any of the projects included in this document or other federally funded research taking place on our campus.

Michael Lenn
Director, Office of Federal Relations
202-507-6136, michael.lenn@wisc.edu

Marsha Mailick
Vice Chancellor for Research and Graduate Education
608-262-1044, marsha.mailick@wisc.edu

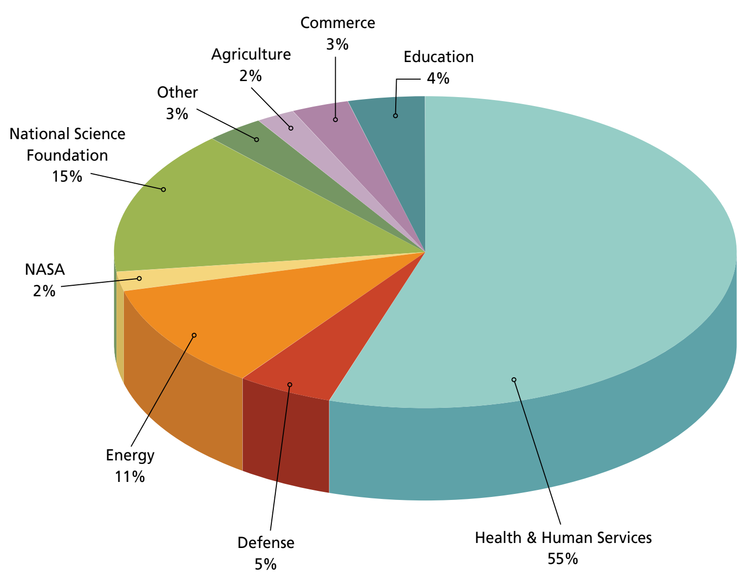
Revenue Sources

The largest portion of the university's budget, approximately $884 million, or 30 percent, is from the federal government. Most of this is competitively awarded to UW–Madison for specific research projects and supports research time for faculty, staff, and students as well as research facilities.



Sources of Federal Research Funding

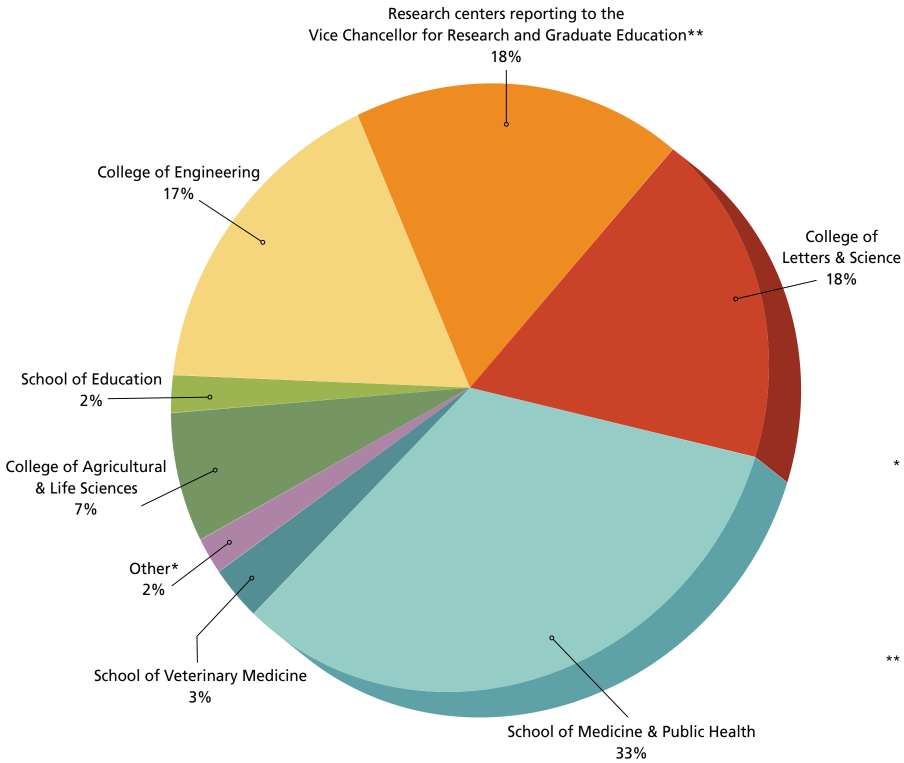
UW–Madison receives federal research awards from many federal agencies including the Department of Health and Human Services, the National Science Foundation, and the Department of Energy. For more than two decades, the university has ranked in the top six annually in total research dollars among all academic institutions in the country. In fiscal year 2015, UW–Madison spent approximately $1.1 billion from the federal government and private sources for research. Federal research dollars have declined nationally in recent years due to federal budget cuts, leading to a decline in federal dollars at UW–Madison. These federal research dollars are awarded competitively for specific projects and require faculty to be entrepreneurial in applying and competing with researchers around the country for funds.



Funding allocation by specific federal agencies for research projects at UW–Madison

Distribution of Federal Research Funds

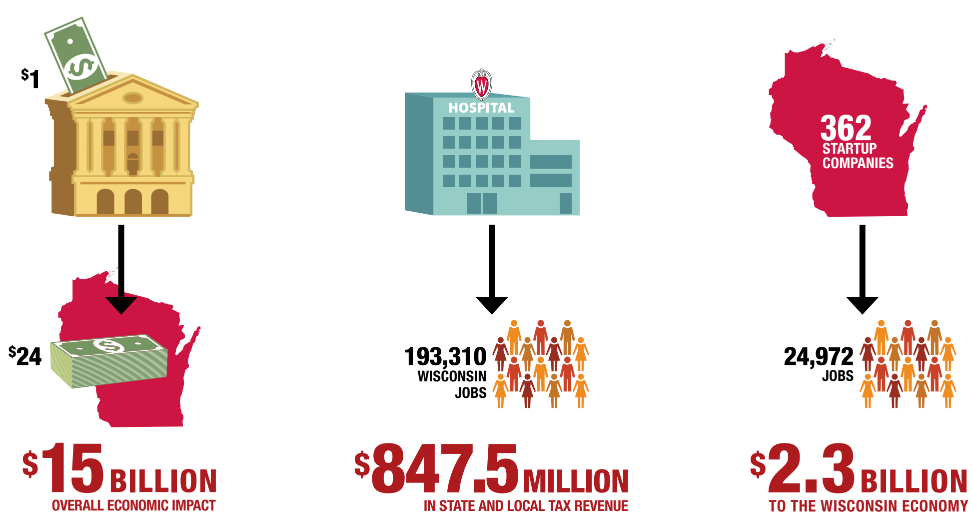
Faculty and staff across the university – in agriculture, life sciences, engineering, business, education, social sciences, arts and humanities – compete for research dollars, which help make UW–Madison a premier public research institution.



* Other includes the Wisconsin School of Business, Nelson Institute for Environmental Studies, School of Human Ecology, the International Division, Law School, School of Nursing, and School of Pharmacy.

** Centers include such entities as the Waisman Center, the Biotechnology Center, and the Wisconsin Institute for Discovery.

This research fuels economic growth and development through the creation of related spin-off companies combined with the money spent throughout the state of Wisconsin to support the research infrastructure. The global research reputation of UW–Madison attracts businesses and generates new start-up companies.



A 2015 study by NorthStar Consulting found that for every state taxpayer dollar spent on UW–Madison, the university generates $24 for the state economy, accounting for $15 billion annually in economic impact statewide.

UW–Madison, UW Hospital and Clinics, and the university's affiliated organizations and startup companies support 193,310 Wisconsin jobs and generate more than $847.5 million annually in state and local tax revenue, according to the NorthStar study.

UW–Madison research has fostered the formation of at least 362 startup companies in Wisconsin, according to NorthStar. The startup companies support more than 24,972 jobs and contribute approximately $2.3 billion annually to the Wisconsin economy.

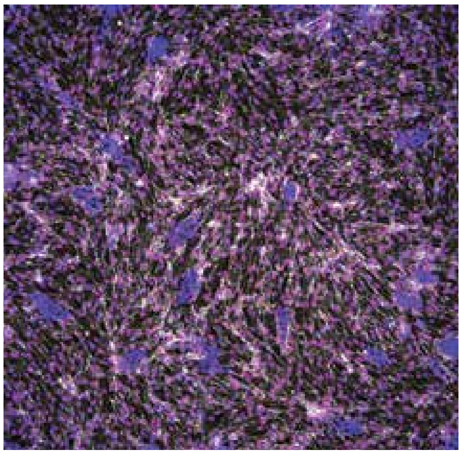
HUMAN HEALTH

UW–Madison received $325.5 million in federal research awards from the U.S. Department of Health and Human Services (2015–16).

United States Department of Health and Human Services

National Institutes of Health

Morgridge Institute for Research



JUE ZHANG, MORGRIDGE INSTITUTE FOR RESEARCH

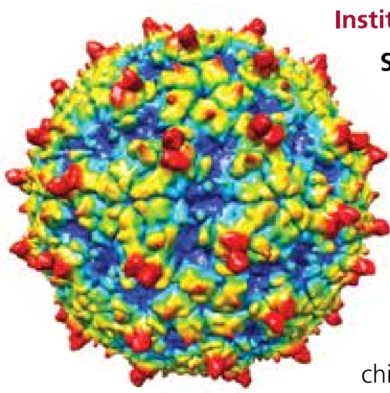
Endothilial cells engineered from iPS stem cells are essential building blocks in the vascular engineering project.

Investigating Tissue-Engineered Arteries for Transplants: Researchers are looking to address both the engineering and biomedical hurdles of creating artery "banks" available for cardiovascular surgery that could transform treatment of many common heart and vascular ailments. If successful, patients needing bypass surgeries would benefit from a better source for arteries. Currently, replacement tissue comes from another part of the patient's body, and suitable tissue can't be found for many patients. Synthetic alternatives available today also fail at a high rate. The promising alternative is to create tissue with cells banked from a unique population of people who are genetically compatible donors, based on rare alleles that circumvent rejection.

Stem Cell and Regenerative Medicine Center

Stem Cell 'Heart Patch' Moves Closer to Clinic: The promise of stem cells to treat cardiovascular disease may soon be a step closer to clinical application as scientists seek to perfect and test three-dimensional "heart patches" in a large animal model — the last big hurdle before trials in human patients. In theory, the heart patches, which are engineered tissue composed of the several different types of cells that make up heart muscle, would be implanted to replace diseased or damaged tissue. If successful, these heart patches would perform all the functions of healthy, beating heart muscle. Treating diseased hearts by implanting healthy, lab-grown cells to replace damaged tissue has been an aspiration of stem cell biologists since all-purpose human stem cells were first derived and cultured at UW–Madison in 1998.

Institute for Molecular Virology



The atomic resolution structure of a strain of rhinovirus C (rhinovirus C15a), the surface of the virus particle.

Solving the Cold Virus Structure Linked to Childhood Asthma: The atomic structure of an elusive cold virus linked to severe asthma and respiratory infections in children has been solved by a team of researchers at UW–Madison and Purdue University. These findings will provide the foundation for future antiviral drug and vaccine development against the *rhinovirus C* virus which is resistant to current antiviral drugs, and no vaccines exist. It was discovered just 10 years ago and health experts believe it is responsible for 50 to 85 percent of all childhood hospitalizations for asthma.

JEFF MILLER, UNIVERSITY COMMUNICATIONS

A strain of *Aedes aegypti* mosquitoes feed from a membrane of blood in Matthew Aliota's research lab insectary.

UW–Madison School of Veterinary Medicine

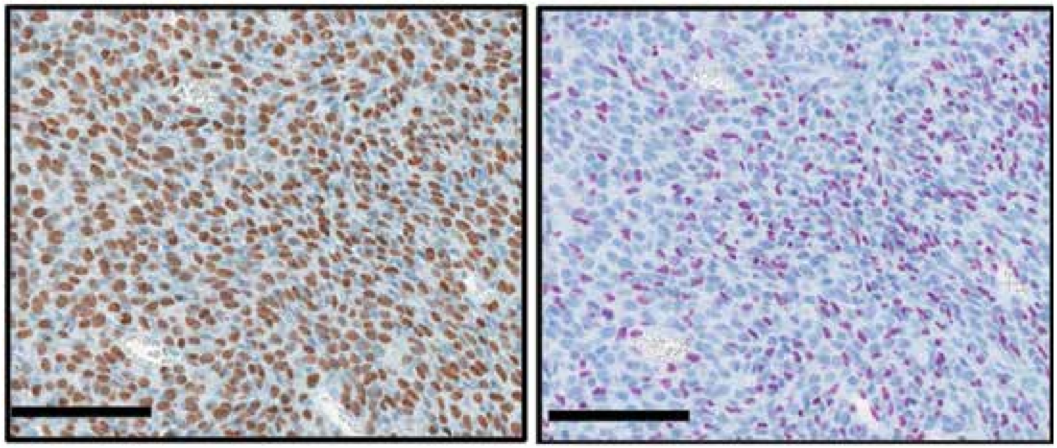
Finding a Solution to Stop the Spread of Zika and Chikugunya Viruses: UW–Madison researchers confirmed that a benign bacterium called *Wolbachia pipientis* could completely block transmission of Zika virus in *Aedes aegypti*, the mosquito species responsible for passing the virus to humans. The bacteria could present a novel biological control mechanism in aiding efforts to stop the spread of Zika virus. Another team of researchers led by UW–Madison faculty have already released mosquitoes harboring the *Wolbachia* bacterium in pilot studies in Colombia, Brazil, Australia, Vietnam, and Indonesia to help control the spread of dengue virus. An important feature of *Wolbachia* is that it is self-sustainable, making it a very low-cost approach for controlling mosquito-borne viral diseases that are affecting many tropical countries around the world.

UW–Madison School of Veterinary Medicine

New Strategy for Precise Seasonal Flu Vaccines: Researchers have developed a novel strategy to predict the antigenic evolution of circulating influenza viruses and give scientists the ability to more precisely anticipate seasonal flu strains. This strategy would foster a closer match for the so-called "vaccine viruses" used to create the world's vaccine supply. The approach used enabled the researchers to assemble the 2014 flu virus before the onset of the epidemic, which was the first demonstration that one could accurately anticipate in the lab future seasonal influenza strains. The developed mapping identifies clusters of viruses featuring novel mutations that, according to the study, can effectively predict the molecular characteristics of the next seasonal influenza virus. Such a prediction could then be used to more effectively develop the vaccine virus stockpiles that the world needs each flu season.

BRYCE RICHTER, UNIVERSITY COMMUNICATIONS

A student receives an influenza vaccination from a University Health Services nurse during a clinic held at the Southeast Recreational Facility in December 2009.



PETER W. LEWIS

Cells from a bone cancer caused by a histone mutation are brown if they contain the mutation (left). Purple cells are intact, without the mutation (right).

UW–Madison School of Medicine and Public Health & Wisconsin Institute for Discovery

Gene Regulatory Mutation Linked to Rare Childhood Cancer: A single defect in a gene that codes for a histone — a "spool" that wraps idle DNA — is linked to pediatric cancers, according to a study by UW–Madison faculty. Unlike most cancers that require multiple hits, researchers found that this particular mutation can form a tumor all by itself, demonstrating the extraordinary power of the histone mutation. This new study focused on the K36 mutation, which blocks the specialization in the type of stem cell that can form cartilage, bone, and fat. When the researchers inserted that mutation into mice, the result was an undifferentiated pediatric sarcoma (cancer of connective tissue). With colleagues from Rockefeller and McGill Universities, UW–Madison also screened human tissues from undifferentiated sarcomas and saw the same K36 mutation in 20 percent of the samples. The enzymes affected by histone mutations have been implicated in many common cancers, and basic knowledge of this specific cancer is essential for starting drug testing that may lead to keeping the mutant histone from inhibiting this enzyme.

FOOD AND AGRICUTLURE

UW–Madison received $14 million in federal research awards from the U.S. Department of Agriculture (2015–16).

United States Department of Agriculture

UW–Madison College of Agricultural and Life Sciences

Happy Hormone's Calcium Connection May Make Cows and Humans Healthier: Serotonin is best known for eliciting feelings of happiness in the human brain, but UW–Madison scientists have found the hormone plays a role in milk production in dairy cows — and may have health implications for breastfeeding women. The study shows that increased serotonin levels lead to increased calcium levels, albeit in different places in different dairy cow breeds. While yielding healthier cows is a worthy result, the understanding of the link between serotonin and calcium may also improve the health of breastfeeding women. Up to 30 percent of pregnant and lactating women treat depression symptoms with drugs called selective serotonin reuptake inhibitors, which increase circulating serotonin levels. This work in dairy cows suggests that the higher levels of serotonin would increase circulating calcium, calcium that would otherwise be strengthening bones. While this provides benefits for treating milk fever in cows, in humans it causes concern about bone loss. Fortunately, this research on a different disease in another species helps to explain bone loss and uncover possible treatments.

UW–Madison College of Agricultural and Life Sciences

Discovering Nematode Resistance in Soybeans: A NIFA-funded research team uncovered the molecular mechanism of a very widely used soybean trait for cyst nematode resistance, the most economically damaging soybean disease. The team discovered that resistant soybeans have both resistance-conferring (mutant) and standard genes encoding this protein. The version of the protein that impairs normal cell function becomes more abundant at soybean cyst nematode feeding sites, preventing nematode growth. Meanwhile, the normally functioning version of the protein dominates throughout the rest of the plant, enabling normal cell function and plant growth. The findings of the study will be useful in developing soybean varieties with increased resistance to cyst nematode resistances.

UNIVERSITY OF MISSOURI EXTENSION

Soybean cyst nematodes in soybean root.

National Science Foundation

UW–Madison Center for Limnology

Report Reveals a Big Dependence on Freshwater Fish for Global Food Security: Freshwater fish play a surprisingly crucial role in feeding some of the world's most vulnerable people, according to a UW–Madison study. Many people in poor nations do not get much animal protein to eat, and freshwater fish provide protein for the nutritional equivalent of 158 million people around the world. By creating a map of the world's fisheries that documents where people catch freshwater fish at the highest rates and then linking it to data about fish biodiversity, ecosystem health, and human nutrition and socioeconomics, the researchers hope the study helps put freshwater fish on the radar for decision makers around the globe.

AARON A. KONING, UW–MADISON

The Pak Mun Dam in northeastern Thailand was considered one of the most destructive dam projects. Each year, the government opens the dam for four months to allow migratory fish upstream to spawn, but regional fishermen report continual declines in the number of fish.

ECONOMIC DEVELOPMENT

U.S. Department of the Treasury

UW–Madison School of Human Ecology

Borrow$mart—A Field Study of an Online Financial Capability Tool's Effects on the Schooling and Financing Decisions of Private-Sector College Students: This project studies the role of online financial counseling for college students who are at high risk of problems in the student loan market. Borrow$mart will yield new insights into strategies for using technology-based tools to assist people in making more informed choices regarding higher education financing and student loan debt. The main goal is to increase college student retention and graduation rates.

U.S. Department of Energy

UW–Madison College of Engineering

COURTESY BRP/EVINRUDE

BRP/Evinrude engineers used KIVA, an open-source software under steady development at the UW–Madison Engine Research Center, to maximize the performance of a new high-powered motor.

UW–Madison Software Helps Build New High-Power Evinrude Outboard Motor: To understand what happens inside the cylinder of an outboard motor running at 5500 rpm, BRP/Evinrude got some help from an unlikely source: software code originally written to understand the motion of air after an atomic bomb explosion. The physics of fluid flow are applicable in both cases, according to the UW–Madison mechanical engineers who helped repurpose the code written by the weapons group at Los Alamos National Laboratory for the auto industry. The result became the basis for a software package called KIVA that predicts and explains the highly complex events inside an engine's cylinder, allowing designers to reach the "sweet spot" of high power, good fuel economy, and low emissions.

When BRP/Evinrude, a venerable Wisconsin manufacturer with 700 employees that is now a division of BRP Inc., embarked on a total redesign of its flagship high-power outboards, it took an entirely different approach: designing in silico rather than metal prototypes. The process relied on KIVA, open-source software that has been under steady development at the UW–Madison Engine Research Center. The result is Evinrude's E-TEC G2 engines, their second generation of two-cycles using fuel injection, but their first to be designed in silico thanks to KIVA software. KIVA's computer modeling not only evaluates designs but also explains why models behave as they do, and it allows for hundreds of runs to explore potentially high-benefit, high-risk paths. Without KIVA, prototypes would be required at an immense cost that could sink the project.

U.S. Department of Agriculture

UW–Madison College of Agricultural and Life Sciences

Dairy Pricing Research: The UW Center for Cooperatives and the UW Center for Dairy Profitability are implementing a USDA grant program to research geographic pricing and competition in the dairy industry. The aim of this research is to determine the influences of distance, presence of cooperatives, and farm-level heterogeneity on milk prices. The program will develop a model to characterize and measure market power where cooperative and non-cooperative buyers compete for farmers' output. By collecting farm-level price data, the team will be able to provide farmers with benchmark reports that compare prices between nearby farms.

SCIENCE AND TECHNOLOGY

UW–Madison received $88.7 million in federal research awards from the National Science Foundation (2015–16).

National Science Foundation

UW–Madison College of Engineering

New Material Combines Useful, Typically Incompatible Properties: Most materials are capable of being only one thing at a time, but a team of engineers and physicists have created an entirely new material in which completely contradictory properties can coexist. The compound is a polar metal. Through a new synthesis approach supported by computational modeling, the group made a crystal with multiple personalities: part polar, part metallic. The approach is an attempt to accelerate the discovery of multifunctional materials with unusual coexisting properties, paving the way to developing devices with the ability to perform simultaneous electrical, magnetic, and optical functions.

IceCube

New Frontiers in Astronomy: IceCube is a cubic-kilometer detector at the South Pole that records the interactions of nearly massless, subatomic particles called neutrinos. The search for very high-energy neutrinos started back in the 1960s, when they were proposed as ideal cosmic messengers to explore the extremes of the universe, bringing us information about environments such as black holes and neutron stars. IceCube was the first, and to date remains the only, detector to ever observe these astrophysical neutrinos. The results published by *Science* in November 2013 have been recognized as the start of a new era in astronomy.

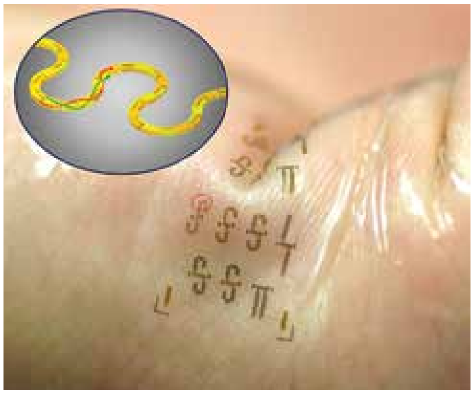
IceCube was awarded the 2013 Breakthrough of the Year by *Physics World* and was also highlighted as one of the top science stories for that year by *Scientific American* and *Nature*. The IceCube Collaboration includes nearly 300 researchers from 48 institutions in 12 countries. The Wisconsin IceCube Particle Astrophysics Center (WIPAC) at UW–Madison operates the IceCube Neutrino Observatory and led the construction of the detector.

UW–Madison College of Letters & Science

High-Throughput Computing Helps LIGO Confirm Einstein's Last Unproven Theory: From revealing the Higgs boson, among the smallest particles known to science, to detecting the impossibly massive astrophysics of black holes, the HTCondor High-Throughput Computing (HTC) software has proven indispensable to processing the vast and complex data produced by big international science. Computer scientists at UW–Madison pioneered these distributed high-throughput computing technologies over the last three decades. The announcement that scientists from the Laser Interferometer Gravitational-Wave Observatory (LIGO) unlocked the final door to Albert Einstein's Theory of Relativity — proof that gravitational waves produce ripples through space and time — has a rich back story involving HTCondor. Since 2004, HTCondor has been a core part of the data analysis effort of the project that includes more than 1,000 scientists from 80 institutions across 15 countries. By the numbers, more than 700 LIGO scientists have used HTCondor over the past 12 years to run complex data analysis workflows on computing resources scattered throughout the U.S. and Europe.

U.S. Department of Defense — Air Force Office of Scientific Research

UW–Madison College of Engineering



YEI HWAN JUNG AND JUHWAN LEE

Fabricated in interlocking segments like a 3-D puzzle, these new integrated circuits could be used in wearable electronics that may allow health care staff to monitor patients remotely.

Fast, Stretchy Circuits Could Yield New Wave of Wearable Electronics: A team of UW–Madison engineers has created the world's fastest, stretchable, wearable integrated circuits, an advance that could drive the Internet of Things and a much more connected, high-speed wireless world. The advance is a platform for manufacturers seeking to expand the capabilities and applications of wearable electronics — including those with biomedical applications — particularly as they strive to develop devices that take advantage of a new generation of wireless broadband technologies referred to as 5G. And, unlike other stretchable transmission lines, whose widths can approach 640 micrometers (or .64 millimeters), the researchers' new stretchable integrated circuits are just 25 micrometers (or .025 millimeters) thick. That's tiny enough to be highly effective in epidermal electronic systems (electronics that adhere to the skin like temporary tattoos). In an intensive care unit, epidermal electronic systems could allow health care staff to monitor patients remotely and wirelessly, increasing patient comfort by decreasing the customary tangle of cables and wires.

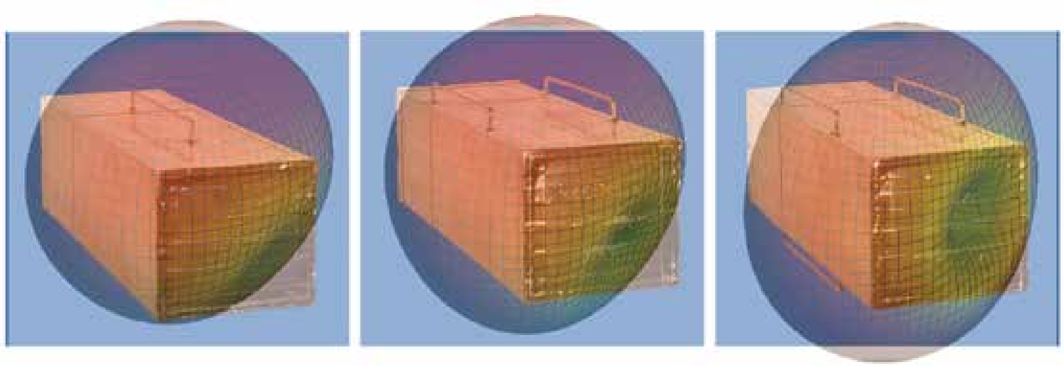
DEFENSE AND NATIONAL SECURITY

UW–Madison received $29.4 million in federal research awards from the U.S. Department of Defense (2015–16).

Department of Defense, Office of Naval Research

UW–Madison College of Engineering

Antenna Design Turns Entire Vehicles into Broadcasting Equipment: High-frequency antennas transmit radio waves across vast distances and even over mountain ranges using very little energy, making them ideal for military communications. These devices, however, have one big problem: In order to operate efficiently, they need to be extremely large in size. Instead of adding more bulk, UW–Madison engineers are working to improve the effectiveness of antennas by turning the military vehicles that carry them into transmitters — using the structures that support the antennas themselves to help broadcast signals. The team has already demonstrated a proof of principle using computer simulations and scale models of simple military platforms and is recruiting students to further develop practical applications.



NADER BEHDAD

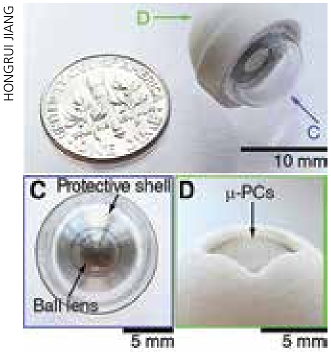
UW–Madison engineers built scale models of military platforms to test the efficiency of radio broadcasts. Heat maps of signal intensity indicate that the platforms transmit communications comparably to existing antennas.

National Institutes of Health

UW–Madison College of Engineering

Fish-Eyed Lens Cuts Through the Dark: Combining the best features of a lobster and an African fish, engineers have created an artificial eye that can see in the dark. The biologically inspired approach stands apart from other methods in its ability to improve the sensitivity of the imaging system through the lenses rather than the sensor component. This development could help search-and-rescue robots, bomb-diffusing robots, and laparoscopic surgical scopes by making dim surroundings seem bright as day.

HONGRUI JIANG



The ball-shaped, fingertip-sized artificial eye uses thousands of mirrors and a domed shape (image D) to concentrate scant light.

ENERGY AND NATURAL RESOURCES

UW–Madison received $62.7 million in federal research awards from the U.S. Department of Energy (2015–16).

United States Department of Energy

Wisconsin Energy Institute — Great Lakes Bioenergy Research Center

Chemistry Lessons from Bacteria May Improve Biofuel Production: A new analysis of a group of bacteria called *Streptomyces* reveals the way some strains of the microbe of decaying plants develop advanced abilities to tear up cellulose. Researchers measured the relative abilities of more than 200 types of *Streptomyces* bacteria and were able to collect the genomes of more than 120 of those strains and identify the genes — and the ways in which key genes were expressed — that set strong cellulose degraders apart from poor ones. The successful *Streptomyces* strains ramp up production of certain enzymes, the proteins that do the cleaving and dissolving and picking apart of cellulose. These important enzymes and new groups of enzymes that have been identified may represent an improvement over current industrial processes and could make for a great boon to bioenergy production by introducing more efficient ways industry might mimic their abilities to make fuel from otherwise unusable plant material.

DON PARSONS, UW–MADISON

The ability to break down the cellulose in plant material is rare in *Streptomyces* bacteria, except in strains that live alongside insects such as honeybees, leaf-cutter ants (pictured), and some beetles that eat or make use of the woody parts of plants.

Great Lakes Bioenergy Research Center assistant research specialist Quinn Dickinson picks a colony of a new yeast strain that could reduce the cost of biofuels produced with ionic liquids.

WISCONSIN ENERGY INSTITUTE

Wisconsin Energy Institute — Great Lakes Bioenergy Research Center

New Method for Bio-Designing Yeast Could Improve Biofuel Production: A researcher at the Great Lakes Bioenergy Research Center (GLBRC) has designed a new strain of yeast that could improve the efficiency of making fuel from cellulosic biomass such as switchgrass. Both the yeast strain and the method of its design could help overcome a significant bottleneck in the biofuels pipeline — namely, that the powerful solvents so good at breaking down biomass also sometimes hinder the next critical step of the process, fermentation. Engineering this new strain of yeast that is resistant to ionic liquids and does not require the removal of residual ionic liquid after deconstruction could lower the costs of making biofuels. However, the technique used to develop the new yeast strain, chemical genomics-guided bio-design, is equally novel, and rich in potential for future applications.

United State Geological Survey

University of Wisconsin Aquatic Sciences Center

New Tool for Tracking Mercury: Researchers around the world now have a new tool for determining the source of mercury contamination thanks to UW–Madison researchers. Researchers collected sediment samples from 58 locations around the Great Lakes for the project. They analyzed the samples for stable isotopes of mercury and used those chemical "fingerprints" to determine sources. They compared the mercury signatures in the lakes against those previously found in lake trout and burbot collected in Lakes Michigan, Superior and Ontario. The mercury fingerprinting tool can also help resource managers distinguish mercury deposited by past industrial practice, known as "legacy mercury," from newer sources. Over the two-year study, researchers found that in Lakes Superior and Huron, most mercury comes from the atmosphere. In Lakes Erie and Ontario, most mercury comes from industrial activity or runoff from the land surrounding the lakes and the other watershed sources. Lake Michigan is beset in general by relatively equal combinations of all three contributing sources: atmospheric, industrial, and watershed.

HUMANITIES AND ART

National Endowment for the Humanities (NEH)

UW–Madison College of Letters & Science

Preserving Historic Recordings: Thanks to an NEH grant, UW–Madison's Center for the Study of Upper Midwestern Cultures and the UW–Madison Mills Music Library are creating the digital preservation of a unique collection of historic sound recordings. This award will ensure that listeners today and in the future will be able to hear these rare fragments of Wisconsin and the Upper Midwest's musical past. More than 25 cultural traditions of Wisconsin and the Upper Midwest are captured on field recordings, home recordings, and the earliest commercial recordings. Dating from 1900 to the 1980s, these 78 rpm discs, DATs, cassettes, and reels are fragile, deteriorating, or require obsolete and specialized equipment for playback.

UW LIBRARIES DIGITAL COLLECTIONS

Otto Rindlisbacher at the wheel, with Iva Rindlisbacher and other members of the Lumberjacks, c. 1930s. Rindlisbacher and his fellow musicians are among those forgotten voices of Wisconsin's cultural heritage to be digitally preserved and accessible.

EDUCATION

UW–Madison received $24.4 million in federal research awards from the U.S. Department of Education (2015–16).

U.S. Department of Education

UW–Madison School of Education

Leading Education Research: The Wisconsin Center for Education Research (WCER) remains highly successful in producing relevant, rigorous, and broadly applicable research findings with a focus on improving student performance and closing academic performance gaps, lowering barriers to school success and reducing behavioral problems, and creating the next generation of English language proficiency tests.

National Endowment for the Humanities (NEH)

UW–Madison Continuing Studies

Creating a Pipeline to College for Economically Disadvantaged Children: The UW–Madison Odyssey Project has received a challenge grant from NEH to help expand Odyssey Junior, a multigenerational approach to breaking the cycle of poverty through the transformative power of the humanities. The Odyssey Project has a 14-year track record of empowering adults near the poverty level to overcome adversity and achieve their dreams through higher education. It offers a two-semester humanities course that lets students rediscover the joy of learning while earning six credits from UW–Madison. With NEH funding, Odyssey Junior, which is open to children and grandchildren of Odyssey participants, will provide students with books and offer scholarships to programs that match their interests. The grant will also support the quarterly publication of a newsletter written by students.

For more information, please contact
UW–Madison's Office of Federal Relations
www.federalrelations.wisc.edu

Michael Lenn
Director, Federal Relations
michael.lenn@wisc.edu
20 F Street, NW, Suite 755
Washington, D.C. 20001
202-507-6136

Cate Johnson
Assistant Director, Federal Relations
catherine.johnson@wisc.edu
20 F Street, NW, Suite 753
Washington, D.C. 20001
202-507-6135