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## CULTURAL POWERHOUSE

What's an artful Buckeye to do?

## Making a Difference

An update on Ohio State's local and global impact

Online

## OHIO STATE 24/7

[osu.edu](http://osu.edu)

This is a remarkably exciting time at Ohio State! Students and faculty are making great strides and great headlines: best-ever freshman class, national academic awards for students and faculty alike and research and outreach programs that improve lives in our neighborhoods and around the world.

Beyond those headlines, the full story of the university's strength and impact is even more impressive.

- Research conducted by faculty and students is making a tangible difference, from protecting the food supply to developing sustainable energy. Scholarship in the arts and humanities nurtures cultural vitality and brings human expression to the fore.
- The Ohio State University Medical Center is one of the country's best, educating future physicians and nurses, providing excellent patient care and conducting some 2,000 active clinical trials.
- Through the university's six campuses, Ohio's students have access to a top-ranked education. Through P-12 initiatives and collaborations, we help to assure that young people gain the strong academic foundation needed to flourish in college and beyond.
- Ohio State generates a statewide economic impact of more than \$4 billion each year. We partner with more than 240 Ohio-based businesses, purchasing more than \$200 million annually in goods and services.

What does it mean to have one of the nation's largest and top-ranked public research universities in your own backyard? It means plenty of things to cheer about—even when it is not football season!

President, The Ohio State University

"The university has never been bounded by High and Lane. We always have been, and always will be, Ohio's university—fully dedicated to improving the lives of our citizens."



### Something to cheer about!

"O-H-I-O" is seen around the globe, wherever Ohio State alumni, students, faculty and fans show their Buckeye Pride. View the new TV spot at [osu.edu/O-H-I-O](http://osu.edu/O-H-I-O). Check out the free O-H poster inside this insert!



**VOLUNTEER SPIRIT**  
Reached 1.5 million citizens in 2007–08 through community-service initiatives

**ACCESS TO SUCCESS**  
Working to ensure that all qualified students in Ohio, regardless of income, can attend college

**RESEARCH PROWESS**  
World-class status in global climate change, cancer, infectious disease and ag-bio products that feed and fuel the world



**GLOBAL UNIVERSITY**  
Ranked 10th among research universities for number of students studying abroad

## Quick Picks



- Ohio State has campuses around the state—in Columbus, Lima, Mansfield, Marion, Newark and Wooster.
- The university has awarded more than 594,000 degrees since 1878.
- The Columbus campus is one of the nation's largest with nearly 53,000 students.
- The 2008 incoming class is the most academically prepared in history, with an average ACT score of 27.3.
- Ohio State's legacy extends to 420,000 alumni living and working around the world.
- Ohio State sports one of the few self-supporting athletics departments in the country.

**BEST IN CLASS**  
Ranked among the top-20 public universities



**DISCOVERY**  
The heart of Ohio State's teaching and research mission



**PRAISEWORTHY MEDICINE**  
One of "America's Best Hospital's" by U.S. News & World Report for 16th year, with eight specialties ranked among nation's best in 2008

# Buckeye students on the road to success



**“Talented high school seniors should choose Ohio State to compete for the best academic opportunities.”**

—Mike Lanese, former Buckeye wide receiver and Rhodes Scholar



Jessica Hanzlik

## Student research: the seeds of change

Every year, Ohio State undergraduates have the chance to share their inspiration at the Denman Undergraduate Research Forum, a joint effort between the Undergraduate Research Office, the Office of Research and the Honors & Scholars Center. At this year's forum, one student found a gene that might cause brain cancer. Others studied childhood diabetes, depression, the treatment of sex offenders, gender discrepancy in science and film's effects on teen smoking.



The research isn't limited to science. Among the fields studied were architecture, art, communication, dance, education and theatre. One

Jessica Hanzlik is convinced that fortune, as much as anything, helped her earn a 2008 Rhodes Scholarship, one of the most prestigious academic honors in the world.

But Dave Tomasko, director of the Ohio State Honors Collegium, says luck had little to do with it. As the director of a program that identifies, nurtures and nominates students for prestigious scholarships and fellowships, he explains that “the Rhodes committee saw in Jessica an opportunity to invest in a young woman who will change the world as a physicist.”

Hanzlik complemented her physics major with a degree in French this past spring. While pursuing her degrees, she searched for the Higgs boson, the last remaining “theoretically-predicted-but-experimentally-unobserved” particle—a search that led her to become one of only 32 Americans selected in this year's class of Rhodes winners.

“The Rhodes proves that the education I've received at Ohio State within the classroom, in the lab and through extracurricular opportunities cannot be surpassed at any other school,” said Hanzlik.

Hanzlik, 21, plans to earn her doctorate in particle physics, both because of her love of science and her passion to open the field to more women. Hanzlik started the Women in Physics and Women in Math and Science student organizations to promote gender equity.

Hanzlik is just one of many prominent Ohio State scholars. In fact, Ohio State was the only university in the country last year with a Rhodes Scholar and four Goldwater Scholars.



- In 2007–08, 75 percent of Ohio State students received financial aid.
- Fifty-eight percent of the 2008 admitted class graduated in the top 10 percent of their high school classes.
- The Land-Grant Opportunity Scholarship is awarded to at least one low-income, academically talented student from every Ohio county.

## GET CONNECTED to Ohio State

Tips for preparing for college: [osu.edu/access](http://osu.edu/access)

All about the first year: [fye.osu.edu](http://fye.osu.edu)

Financial aid basics: [sfa.osu.edu](http://sfa.osu.edu)

Some of our favorite things: [osu.edu/dosomethinggreat](http://osu.edu/dosomethinggreat)

Campus visits: [undergrad.osu.edu](http://undergrad.osu.edu)



## All-American academics with global impact

Joshua Lotz grabbed the gold as one of 20 students named to the 2008 All-USA College Academic First Team by *USA Today*. A junior majoring in biochemistry and Chinese, Lotz is both All-American and international, with a deep interest in all things Chinese, especially traditional Chinese medicine. After graduating from high school at 16, Lotz worked and saved money to study abroad before entering college. In Tibet, he and two Tibetan friends started a small community school and managed a health care clinic. Now, back in China, Lotz has a fellowship to study the medicinal value of Himalayan poppies and is running a small coffee shop to fund his projects. He plans to return to Ohio State next year to complete his degrees and, ultimately, to become a physician specializing in community health in resource-poor areas like Tibet.

# Making a better world



- Ohio State's Med Center provides more than \$125 million in annual community benefits through charity care, outreach efforts and other support.
- The James Cancer Hospital and Solove Research Institute is ranked among the top-20 cancer hospitals in the nation.
- Nationwide Children's Hospital, home to Ohio State's Department of Pediatrics, is the fourth busiest children's hospital in the country and one of the nation's top 10 in federally funded pediatric research.



Keith Lofton

As a sixth-grader, Keith Lofton wasn't thinking about college. But his father, a factory worker, had a different idea.

“It was important for dad and mom that I attend college because they didn't have that opportunity,” said Lofton.

Enter Ohio State's Young Scholars Program, an effort to change the minds and the futures of the estimated two-thirds of Ohio's poorest high school students who don't see higher education as attainable. Young Scholars connects with sixth graders from Ohio's nine largest urban communities and offers them academic mentoring, early college preparation and access to resources.

“I did suffer some at first. You don't want your friends knowing you're going to a summer academic camp. It wasn't until 10th grade that I had an epiphany and knew Young Scholars was right for me,” said Lofton.

Thanks to a four-year scholarship, Lofton became the first male in his family to graduate from college in 1999. Lofton now pays it forward, working as program coordinator of Young Scholars in Cleveland. [oma.osu.edu/ysp](http://oma.osu.edu/ysp)

## Other college-prep initiatives

- **The Schoenbaum Family Center at Weinland Park** provides care and education to children from birth through pre-K, family advocacy services and preschool wellness and parenting programs. The center also trains Ohio State students to be extraordinary teachers and care providers while generating research to help children from challenged neighborhoods thrive.
- **The Metro School**, open to any Franklin County high school student, focuses on math, science and technology and is garnering national attention for innovation and effectiveness. “We're looking at the broader question of how we augment math, science and technology understanding from birth to college,” said Principal Marcy Raymond. [themetroschool.com](http://themetroschool.com)
- **The Economic Access Initiative** helps low-income and first-generation students and their advisors navigate college-planning and financial aid labyrinths. [osu.edu/access](http://osu.edu/access)



**“Families know they want to send their kids to college, but they aren't always sure how to get there. It's not just about enrolling. It's about finding ways to help them stay and graduate.”**

— Tally Hart, senior advisor for the Economic Access Initiative in Academic Affairs

# Inspiration and innovation: why research matters



Discussions about research at Ohio State often focus on a massive university enterprise funded by hundreds of millions of dollars each year. While money matters—especially because of economic impact—the value of research extends far beyond dollars and cents.

For Ohio State faculty, staff and students, nothing spurs creativity and resiliency like the challenge of analyzing a problem or creating a better mousetrap. And for society, the world-class innovative researchers who are part of the Ohio State family truly can chip away at seemingly intractable, critical issues such as feeding starving people, preserving our environment and eliminating disease.

Some of our explorations may seem small—so tiny, in fact, that they cannot be seen by the human eye—but they can cause a palpable impact. Physicians, biologists and geneticists investigate the body at the cellular level to learn why some cancer cells grow and travel and others don't. Or why recovery from a heart attack can cause almost as much damage as the attack itself.

This work is not restricted to medicine. Engineers, chemists and physicists mold and remold minuscule compounds, molecules and particles to improve products used in everyday life—including numerous energy options for consumers and ceramic body armor to better protect our armed forces.

On the other end of the scale are scientists who travel to the end of the earth to extract enormous ice core samples that document the realities of global warming trends. Astronomers peer through the vast depths of galaxies and dark matter to better explain the universe in which we live.

And then there are the interdisciplinary teams of scientists who bring us back down to earth by describing the complexities of how our hearts and minds are linked—not just figuratively, but literally, through a physiological mind-body connection. Social scientists and legal and business experts inform us about human behavior patterns. Humanities scholars unwrap the richness of multiple cultures and languages.

Our sheer size and depth are part of what makes Ohio State capable of changing the world. And, thanks to cross-institutional teams and President Gee's leadership, specialists with diverse skills now collaborate to tackle some of our toughest issues. How can Ohio evolve from the nation's breadbox to a primary distributor of safe and healthy food products? How can we respond to avian flu, biological weapons and other public health threats? These are just a few of the questions Ohio State is addressing to make our world a safer, healthier place.



**“Our interdisciplinary approach to research leads to more ‘Eureka!’ moments that signal the transformation of basic discoveries into tangible public benefits.”**

—Caroline Whitacre, vice president for research



## Quick Picks



- The university's total research expenditures in 2007 topped \$720 million, putting Ohio State in the top 10 nationally (ranked ninth), second in industry research and seventh among public universities.
- In four of the last five years, Ohio State has led the country in the number of new faculty honored as fellows of the American Association for the Advancement of Science.
- The university has pledged \$110 million to Targeted Investments in Excellence, collaborative research efforts to target major global concerns.

## Research roundup

- **From the Mapping and Geographic Information Systems Lab:** The same Ohio State researcher helping Rovers navigate the surface of Mars has landed a NASA grant to develop a GPS-like system for traversing the moon.
- **From the Center for Molecular Neurobiology:** Tracking a select group of compounds that interact with a protein in the brain could lead to earlier diagnosis and treatment of Alzheimer's disease and other dementia disorders.
- **From The James:** Genetics appear to be the cause of one in every 10 colon cancer cases.
- **From the Center for Human Resource Research:** Divorce, smoking and obesity not only impact physical and mental health, they detract from an individual's ability to save money and build wealth. This research offers practical tips on how people can protect their financial future.

## Fueling the world

Ohio State faculty and students are teaming up with the auto industry and other businesses to be energy-smart and environmentally sensitive. Just ask mechanical engineering student Ehsan Sadeghipour, a Goldwater recipient who contributed to an algorithm that reduced energy use in Honda's automotive paint booths. Thanks to researchers like him, we're racing toward a greener, more affordable future. Other research under way:



- Creating bio-butanol, a plant-based fuel similar to ethanol but with even more powerful advantages.
- Making hydrogen fuel for cars available nearly everywhere.
- Converting waste heat from a car's engine and exhaust system into electricity.



## GET CONNECTED to Ohio State

What's new in research? [researchnews.osu.edu](http://researchnews.osu.edu)

Recent medical breakthroughs: [medicalcenter.osu.edu/research](http://medicalcenter.osu.edu/research)

Information for inventors, investors and industries: [tlc.osu.edu](http://tlc.osu.edu)

Ohio State's research blog: [researchnews.osu.edu/blog](http://researchnews.osu.edu/blog)

Ohio State's Office of Research: [research.osu.edu](http://research.osu.edu)



## Cultivating farming technology

Much has changed since the Ohio Agricultural and Mechanical College opened in 1870. Yesterday's crops evolved into ag-bio innovations, fertilizer became biomass.

But farming remains the state's biggest business at \$80 billion with a million jobs a year. Ohio State's Agricultural Research and Development Center in Wooster collaborates with farmers and businesses on pioneering breakthroughs like how to conserve water or safeguard soybeans. The university's extension offices in Ohio's 88 counties help to harvest \$159 million in annual economic fruits through their educational efforts. And the annual Farm Science Review, a three-day trade show just wrapping up its 46th year, plants Ohio State knowledge—from no-till farming to high-tech GPS systems—into local farmers' hands.



## Cultural powerhouse

Ohio State showcases the best in arts and culture this season with an exclusive Andy Warhol exhibition and a downtown collaboration with the Columbus Museum of Art. To see:

- “Other Voices, Other Rooms,” the only U.S. site of a new Andy Warhol exhibition at the Wexner Center, on campus at North High Street and 15th Avenue. [wexarts.org](http://wexarts.org)
- An eclectic collection of Ohio State treasures, including unpublished photos of Marilyn Monroe and John Glenn's flight manual in “Objects of Wonder,” at the Columbus Museum of Art. The exhibit also features cell phone tours narrated by Archie Griffin and John Glenn. [columbusmuseum.org](http://columbusmuseum.org)
- Exhibit by Professor Emeritus Sid Chafetz and the 2008 Department of Art Faculty Exhibition at the new OSU Urban Arts Space in the historic Lazarus building. Go on a Tuesday or Thursday for free public programs. [arts.osu.edu/uas](http://arts.osu.edu/uas)

## GET CONNECTED to Ohio State

Find out what Ohio State can do for you: [outreach.osu.edu](http://outreach.osu.edu)

Need something to do? [osu.edu/events](http://osu.edu/events)

Need a doctor? [medicalcenter.osu.edu](http://medicalcenter.osu.edu)

Need art? Visit: [arts.osu.edu](http://arts.osu.edu), click “Crave Art”

Get connected to Buckeye news: [osu.edu/connect](http://osu.edu/connect)



Teaching. Research. Patient care.  
Tied together perfectly.

**We are The Ohio State University Medical Center.**  
We are educating the doctors and nurses of tomorrow.  
Our researchers are finding new ways to treat disease  
and improve lives. And our teams of experts are improving,  
innovating and advancing medicine for you and your family.  
We are always future focused.

[www.medicalcenter.osu.edu](http://www.medicalcenter.osu.edu)



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