Charles Kankelborg, a solar physicist at Montana State University, received the Presidential Early Career Award for Scientists and Engineers, the highest award given by the United States government. In addition, Kankelborg is involved in a new space mission which recently received $3 million from NASA, to figure out how energy is transferred through the sun’s atmosphere.

Tim McDermott, professor in the Department of Land Resources and Environmental Sciences, is among MSU’s foremost researchers in Yellowstone. He was a lead author on a paper describing a simple one-celled algae, Cyanidioschyzon, found in Yellowstone National Park that thrives in extremely toxic conditions. The discovery could someday help reclaim arsenic-laden mine waste and aid in everything from space exploration to creating safer foods and herbicides.

MSU computer scientist Jian Tang has won a five-year, $400,000 grant from the National Science Foundation for his work in wireless technology that could enhance emergency communications and improve Internet service in rural areas. Tang’s work focuses on a technology called WiMAX, which allows engineers to build flexible and dynamic networks that transmit data at high speeds over long distances.

Engineering and German student, with a 4.0 GPA, and Bobcat athlete Elisabeth Driscoll was named to an academic all-America first team for ESPN the Magazine. Driscoll was a three-time Big Sky Conference all-conference selection in cross country, a two-time all-conference selection in track and field and is the conference champion in the 10-kilometer run.

EXCEL Nationally and internationally recognized scholars

→ MSU had two new Goldwater Scholarship recipients in 2009, Joe Azzarelli and Ben Naab, who are both chemistry majors. Montana State University is ranked 11th nationally for number of Goldwater Scholarships, the nation’s premier scholarship for undergraduates studying math, natural sciences and engineering. MSU’s rank puts it just behind Yale and MIT and ahead of other distinguished institutions including Johns Hopkins, University of Washington and Purdue.
Montana State University is one of only 96 institutions, out of more than 4,400, that meet the Carnegie Foundation for the Advancement of Teaching’s criteria for the highest research classification. That means MSU’s level of research activity is comparable to prestigious universities like Cal Tech, Harvard, Berkeley, the University of Washington and the University of Colorado. MSU is the only top tier research institution in the five-state region of Montana, Wyoming, Idaho and North and South Dakota.

The U.S. Department of Energy awarded $66.9 million to the MSU-led Big Sky Carbon Sequestration Partnership to fund a large-scale carbon sequestration project that will inject a million tons of CO₂ into sandstone formations beneath the ground.

The National Center for Complementary and Alternative Medicine, a component of the National Institutes of Health, awarded MSU a $6 million grant for three new research projects. The projects, headed by Mark Jutila, David Pascual and Michele Hardy, focus on understanding the mechanisms that make alternative and complementary medicines work or not work.

A $100,000 grant from the National Science Foundation was awarded to business professor Laura Black and her team of researchers to expand their study of virtual organizations. The team will continue its study of how virtual organizations—or businesses and organizations made up of people who are not physically in the same place—can be more effective.

MSU opened a $2 million SubZero Science and Engineering Research Facility. The lab will enhance research in topics as diverse as the causes of avalanches, the characteristics of organisms living in Antarctic ice and the effect of ice on road surfaces in winter.

FIND MORE POINTS OF EXCELLENCE AT WWW.MONTANA.EDU/CPA/POE
MSU students are at the intersection of learning and the discovery of knowledge. Core 2.0 is an innovative inquiry and research-based curriculum created to provide all students the best possible learning experience, including an undergraduate research or creative experience.

Three graduate students in the Exercise Science program won awards for their research presentations at the Northwest American College of Sports Medicine meeting in Seattle. MSU won three awards for the second year in a row, which has never happened before for a single program.

A group of six juniors from MSU finished third in the pre-construction event at the Associated Schools of Construction’s regional competition in Reno, Nev., in February 2009. The team beat out teams from big-name schools like Arizona State and BYU across ASC regions six and seven.

In 2009 MSU added a Sustainable Food and Bioenergy Systems degree program, which brings together coursework in plant sciences, agriculture, food and nutrition, and ecology.

MSU researcher and recent master’s graduate Chris Arrasmith is working with doctors at Vanderbilt Medical Center in Tennessee to build a handheld laser microscope that could reduce the number of biopsies needed to diagnose skin cancer.

Montana State University student-athletes recorded their 14th consecutive semester of team grade point averages above 3.0 in fall 2008. Student-athletes received 22 perfect individual GPAs for fall semester.

The Montana State University Department of Native American Studies has received accreditation from the World Indigenous Nations Higher Education Consortium, the first mainstream nonindigenous controlled institution in the world to ever receive the designation.

MSU’s Science and Natural History filmmaking program provides students with a unique set of skills that has helped seven graduates or former students gain employment at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center in Maryland.
Nursing professor Yoshiko Colclough received a $106,782 grant from the Lance Armstrong Foundation to work with the Blackfeet Tribe on alleviating pain and suffering resulting from serious illness, especially cancer.

The National Institutes of Health awarded a five-year, $17.5 million grant to the Montana IDeA Network for Biomedical Research Excellence (INBRE) program to improve the state’s capacity for biomedical research and train new scientists in that field. Led by Montana State University, INBRE focuses on understanding infectious diseases of concern to Montanans, such as West Nile and hantavirus.

Montana State University’s Department of Education and the Montana Rural Education Association have partnered to offer a new graduate program in educational leadership for prospective principals and superintendents. The program, designed specifically for rural educators, focuses on issues and challenges unique to leaders in rural schools.

MSU scientist Ben Lei and graduate student Yanchao Ran are working on a vaccine to prevent strangles, a highly contagious horse disease similar to strep throat in humans. Lei hopes to develop a more effective and safe vaccine that will prompt the horse’s body to produce antibodies that neutralize the infection.

As the state’s land grant institution, MSU strives to improve lives through education, outreach and new discoveries. Prolific research has resulted in many discoveries that stimulate economic growth. MSU has more than 182 active technology licenses, 104 of which are with Montana companies, and 110 patents have been issued for discoveries.

Service through education and outreach

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EXPLORE Spectacular educational setting

Bozeman ranked number two on Bizjournals.com list of top 10 “dreamtowns” that offer the best quality of life without the metropolitan hassles. The highest scoring cities were “well-rounded places with light traffic, healthy economies, moderate cost of living, impressive housing stocks, strong educational systems and easy access to big city attractions.”

MSU scientists have helped confirm that protein from dinosaur bones can be preserved for millions of years and that birds and dinosaurs are close relatives. The breakthrough was published in the May 1, 2009 issue of “Science,” a weekly journal that publishes scientific news, as well as the most significant breakthroughs in global research. ➤

Sixteen years of MSU research in Yellowstone National Park was summarized in a new book titled “The Ecology of Large Mammals in Central Yellowstone: Sixteen Years of Integrated Field Studies.” Ecologist Robert Garrott edited the book to provide readers a synthesis of a diverse body of research.

Architecture students at Montana State University designed a picnic pavilion that was built in the summer of 2009 near the popular Hyalite Reservoir. The pavilion was a joint project of the MSU School of Architecture, the U.S. Forest Service and the Gallatin Empire Lions Club. ➤

MSU has become known as Trout U because of its proximity to premier angling and diverse research and creative projects related to trout. Academic interest in trout spans from the study of whirling disease and stream restoration to creative literary works and one of the world’s largest Trout and Salmonid Collections at Renne Library.