James Madison University's Office of Sponsored Programs

Funding News & Notes

FY 2010 Recognition Issue

Vol. XXIV FY 2010

Inside this issue:

Funding History	1
Sponsor Highlights	2
College & Division Funding	2
Faculty & Staff Accomplishments	3
Compliance Help IRB & IACUC Stats	8

FY10 Quick Facts:

- 236 awards
- 361 submissions
- 156 faculty and staff investigators
- 65% success rate
- Department of Energy largest sponsor at $5.6 million
- Department of Health & Human Services funded most numerous projects at 26
- $26,105,606 in Awards

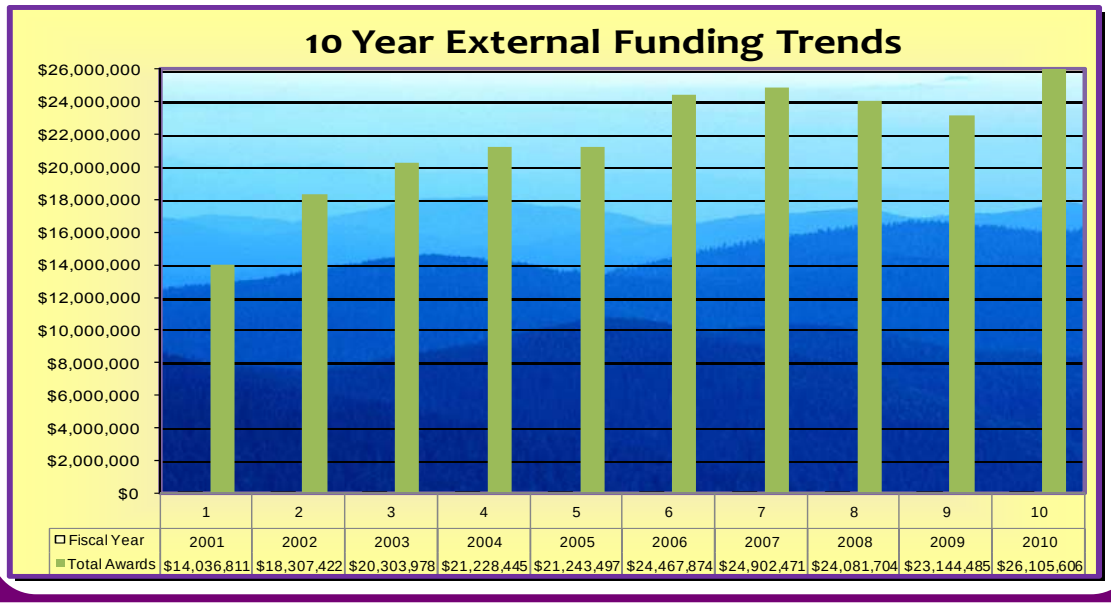
"...scientific discovery takes far more than the occasional flash of brilliance—as important as that can be. Usually, it takes time and hard work and patience; it takes training; it requires the support of a nation."
~President Obama
National Academy of Sciences Annual Meeting

JMU Investigators Secure Funding Exceeding $26 Million

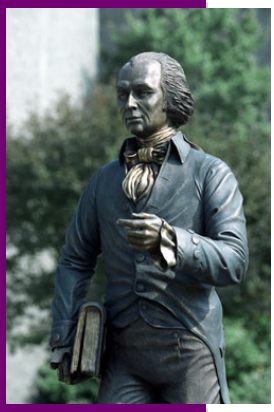
Fiscal year 2010 (FY10) proved to be a benchmark year for James Madison University (JMU) in terms of externally sponsored activities. JMU faculty, students, and staff submitted a total of 361 proposals for external funding to a wide variety of sponsors. During the same period, 236 funding applications were selected to receive external funding. Our personnel attained a 65% funding success rate. The focused efforts of 156 faculty, staff, and students within the JMU community have brought in a total external funding of $26,105,606 during the period July 1, 2009 through June 30, 2010. Notably, involvement in the pursuit of external funding involves numerous individuals forging partnerships across disciplines and among organizations outside of the university community.

Since FY1995, JMU faculty and staff have submitted 4,412 funding applications and won 3,180 awards, earning $258,877,271 towards research, instruction, equipment acquisition, and public service and outreach operations. JMU personnel have increased sponsored funding 761% in 16 years. Between FY2005 and FY2010, external funding remained level during the recession of FY06-FY09 and then surged again to end FY2010 well above the $25 million mark for the first time.

JMU investigators shared in the benefits of the American Recovery and Reinvestment Act, submitting 19 funding proposals and winning 8 awards earning $6,223,117 of federal stimulus funding for the university. Also significant this year, increased efforts for sustainability and conservation related activities won awards totaling $5,959,714 in concert with the university's renewed emphasis on environmental stewardship. Despite challenging economic conditions in the state and nation, innovative collaborations flourished resulting in 9% more submissions, 7% more awards, and 38% more individuals involved over FY09 levels. By all measures, FY10 was a successful year for the university community in terms of sustained efforts to augment meager internal resources in direct support of scholarly and creative endeavors and provision of programs of distinction. ♦



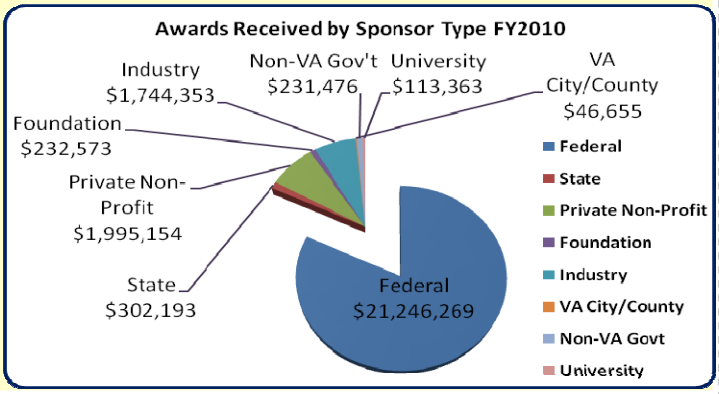
EXTERNAL FUNDING BY AGENCY TYPE



The chart breaks out funding across the various sectors of sponsors that support JMU's excellence in research, education, training, and service along with the total amount awarded. The individual sectors include federal, state, private/non-profit, foundation, city/county, industry, VA city/county, non-Virginia government, and university.

The majority of awards both in number and size came from the federal government in direct assistance and via federal flow-through to the State of Virginia. Combined federal and state funds comprised 82% of total awards. This year the U.S. Department of Energy, aided by the American Recovery and Reinvestment Act, ranked as the single largest federal sponsor, funding six projects worth $5,684,135, or 27% of all federal funding and 22% of all external funding.

State agencies funded 12 projects. It is important to note that state agencies also flowed significant pass-through federal funding to the university; this funding is captured in the federal funding totals since the origin was federal in source. Continuing trends of recent years, the Virginia Department of Education and the Virginia Department of Health comprised the largest percentage of total state contributions. Private/Non-profit sponsors funded 58 projects , up by 61% in just one year. Foundation sponsor support softened again in FY10, funding just 17 projects. Though overall Foundation awards are austere in the present economy, they do include the continued solid support of The Jeffress Memorial Trust for support of junior faculty with ten new and renewal projects in the disciplines of Chemistry & Biochemistry, Physics & Astronomy, and biology and a total of $140,000. Industry sponsors funded 24 projects in FY10 versus 17 projects in FY09, a 41% increase in funded projects over the prior fiscal year. Though funding from the Industry sector remained essentially level from the previous year, entrepreneurial activity has steadily increased as PI's leverage collaborations with their business counterparts to achieve shared goals.♦



ALL COLLEGES & DIVISIONS AUGMENT RESOURCES

In FY10 , all colleges and divisions at JMU sought and gained external funding to support their programs. This year saw another increase in collaborative activity involving multidisciplinary projects, inter-institutional collaborations, and private and industry partnerships to create increasingly complex funding proposals. The College of Arts and Letters received $712,329, or 2.73% of total funding received. The College of Integrated Science and Technology (CISAT) earned $7,615,114 during the year. CISAT's external awards represent 29.17% of the total funding received for the year. The College of Science and Mathematics totals were $2,133,174, or 8.17% of the total amount earned in FY10. The College of Education brought in $806,658, or 3.08% of the total awards during FY10. College of Business investigators earned $835,078 in awards, or 3.20% of the total. The Graduate School brought in $1,984,009, or 7.60% of total funding. Research and Public Service brought in $9,584,767, or 36.72% of all funding received. Science, Technology, Engineering & Mathematics (STEM) obtained $1,759,834, or 6.74% of total funding. All other departments and divisions, which include the College of Visual & Performing Arts, Academic Affairs, Administration & Finance, and The President's Office contributed $674,643, which equaled 2.59% of the total external funding received. ♦

College or Division	Awards	Submissions	Award Value
College of Arts & Letters	14	20	$712,329
College of Integrated Science & Technology	112	152	$7,615,114
College of Science & Mathematics	37	90	$2,133,174
College of Education	9	20	$806,658
College of Business	11	11	$835,078.00
The Graduate School	3	3	$1,984,009
Research & Public Service	25	33	$9,584,767
Science, Technology, Engineering & Mathematics	10	16	$1,759,834
College of Visual & Performing Arts	1	2	$2,125
Academic Affairs	8	10	$566,429
Admin. & Finance/ President's Office	6	4	$106,089
TOTALS:	**236**	**361**	**$26,105,606**

External Funding Successes—FY2010

Ms. Emily K. Akerson, Institute for Innovation in Health and Human Services, received **$9,210** from the Valley Program for Aging Services, Inc. to provide educational and administrative services; **$85,000** from the Department of Social Services to provide education resources and support for first time parents; and **$5,000** from the Page County Department of Social Services to provide education resources and support for first time parents.

Dr. Brian H. Augustine, Chemistry & Biochemistry, and **Dr. Chris Hughes**, Physics & Astronomy, received **$69,000** from the National Science Foundation to research the kinetics and surface modification of nanocomposite polymer thin films.

Dr. Sharon K. Babcock, Institute for Innovation in Health and Human Services, received **$188,717** from Alpha Epsilon Delta to maintain the National Premedical Honor Society Headquarters office.

Dr. George H. Baker, Institute for Infrastructure and Information Assurance, received **$80,673** from an industry collaborator to perform balanced survivability assessments as a subject matter expert in electromagnetic threats, effects, and protection including EMP and electromagnetic weapons; **$50,000** from EMPRIMUS, LLC to provide guidance on effective EMP/RFW protection concepts and design elements; and **$9,216** from ORSA Corporation to review technical reports on a new process for the development of nuclear weapons effects data.

Dr. Alex Bannigan, Biology, received **$10,000** from The Jeffress Memorial Trust to address questions about the function of an arabidopsis motor protein essential to mitosis: kin5c.

Col. Dennis C. Barlow, Mine Action Information Center, received a total of **$1,449,583** from the U.S. Department of State to gather, manage, and distribute information, acting as an information clearinghouse, to encourage and stimulate the support of programs undertaken by the Office of Weapons Removal and Abatement; provide public diplomacy outreach; to foster management skills at the senior level of global mine-action activities by providing training to senior-level managers ; provide, reinforce, and support explosive remnants of war (ERW) risk awareness education to children and other vulnerable populations in Jordan and neighboring territories; to provide training activities and psychological assessment and therapeutic support with physical-rehabilitative activities for affected individuals from the Middle East region; **$189,985** from the National Committee for Demining and Rehabilitation in Jordan (NCDR) to provide a course with expanded focus on the clearance of ERW and landmine contamination; and **$27,939** from the Geneva International Centre for Humanitarian Demining to provide the global mine action community with web access to current international mine action standards.

Dr. Marta K. Bechtel, Biology, received **$10,000** from The Jeffress Memorial Trust to test if lacritin will have an effect on corneal keratocyte cell proliferation, and generation of the repair fibroblast phenotype observed during stromal tissue wound healing.

Dr. Thomas R. Benzing, Integrated Science and Technology, received **$127,000** from the Department of Conservation & Recreation to support educational objectives while spearheading Virginia's implementation of the Chesapeake 2000 agreement; and **$40,515** from DuPont to provide student interns to assist in an ecological study to understand the fate and effects of mercury on the South River and its associated ecosystem.

Dr. Cheryl L. Beverly, Exceptional Education, received **$99,734** from the U.S. Department of Education to offer integrated training and practice opportunities that will enhance the competencies of beginning special education teachers for providing effective services and instruction in academic subjects to children with high incidence disabilities in K-12 classrooms; and a total of **$52,704** from the Virginia Department of Education to facilitate general membership meetings and a general membership professional development retreat; and to support the Early Childhood Special Education Academy.

Dr. Robert N. Brent, Integrated Science and Technology, received **$24,309** from DuPont Engineering to design, construct, and field test a flow-through, gravel/cobble bottom artificial stream for experiments in the South River; and **$6,287** from the Virginia Department of Environmental Quality to develop and conduct a workshop on persistent bioaccumulative toxics for environmental professionals.

Dr. Christie J. Brodrick Hartman, Institute for Stewardship of the Natural World, received **$2,000** from Bully Dog Technologies to evaluate the effects of watch dog units on vehicle fuel and emission reduction.

Dr. Justin W. Brown, Biology, received **$20,000** from The Jeffress Memorial Trust to determine if brainstem areas that are rich in serotonin mediate the cardiovascular and thermoregulatory responses to a hypoxic stress.

Dr. Harold M. Butner, Physics & Astronomy, received a total of **126,634** from the National Aeronautics and Space Administration to contribute to the debris survey with analysis of the Herschel data.

Dr. Kevin L. Caran with **Dr. Kevin P. Minbiole**, Chemistry & Biochemistry, and **Dr. Kyle N. Seifert**, Biology, received **$100,000** from Research Corporation to build comprehensive, mechanism-based understanding of a novel approach to membrane disruption, and thus antimicrobial activity.

Dr. David C. Carothers with **Dr. Laura A. Taalman** and **Dr. Peter D. Kohn**, Mathematics & Statistics, received **$25,836** from W.H. Freeman Publishers to support the development of materials for mainstream courses at JMU that serve several different majors in scientific fields.

Dr. Corey L. Cleland, Biology, received **$20,000** from The Jeffress Memorial Trust to determine how animals with significant but nevertheless limited computational power transform sensory information into effective motor responses.

Dr. Jennifer E. Coffman, International Programs, received **$13,552** from the International Association of Universities to improve campus sustainability, campus greening, and outreach of James Madison University and Kenyatta University in Kenya.

Dr. Anca Constantin, Physics & Astronomy, received **$78,679** from the Space Telescope Science Institute to provide an exhaustive comparative analysis of the nebular emission to constrain the nature of nuclear galactic activity at the lowest levels; and **$50,566** from the Smithsonian Astrophysical Observatory to do analysis for each new Chandra observation, statistical analysis of the sample properties, and comparison with the x-ray properties.

Dr. Steven G. Cresawn, Biology, received **$173,022** from the National Institutes of Health to acquire knowledge that may eventually lead to the treatment and prevention of an infectious disease, *Buruli ulcer*.

Ms. Penelope Critzer, Institute for Innovation in Health and Human Services, received a total of **$75,586** from the Virginia Department of Education to support the programs of the Child Development Clinic; and **$310,000** from the Virginia Department of Health to support programming at the Child Development Clinic.

Dr. Pauline K. Cushman, Integrated Science and Technology, with **Dr. Joseph D. Enedy**, Professor Emeritus, received **$4,850** from the Virginia Geographic Alliance to support responsibilities associated with producing newsletters and traveling for the Alliance ; and with **Dr. Carole L. Nash**, received **$19,995** from Shenandoah National Park to catalog museum objects, field documentation and create a finding aid for these collections and a total of **$4,532** from the City of Harrisonburg to conduct archaeological studies on property at the Ralph Sampson Park.

Dr. David B. Daniel, Psychology, received **$1,500** from Ocean County College to speak at the 2010 Colloquium; and a total of **$5,400** from the International Mind, Brain & Education Society to contribute to the funding and growth of IMBES and the creation of a journal called "Mind, Brain, Education."

Mr. Hugh T. Daughtrey, Computer Science, received **$76,669** from the National Science Foundation to expand the use of the "Reacting to the Past" (RTTP) pedagogy to teach undergraduate science courses.

Mr. Arthur T. Dean, II, Office of Diversity, received **$75,000** from the Jessie Ball duPont Fund to extend the Professor-in-Residence program to the middle school level.

Dr. Michael L. Deaton with **Dr. Joseph H. Marchal,** Integrated Science & Technology, received **$22,075** from the National Institutes of Health, National Library of Medicine to provide access to comprehensive sets of information via a user-friendly interface.

Dr. Rory A. DePaolis, Communication Sciences & Disorders, received **$21,248** from the University of York to explore the differences in infant directed speech between American and British-English.

Dr. Thomas C. DeVore, Chemistry & Biochemistry, received **$9,500** from The Academy of Applied Sciences to conduct the Virginia Junior Science & Humanities Symposium.

Dr. Daniel M. Downey and **Dr. Gina MacDonald**, Chemistry & Biochemistry, received **$102,526** from the National Science Foundation to provide research experiences for undergraduates in the sub-disciplines including analytical, biochemistry, synthesis, natural products, and spectroscopy; and **$10,000** from the USDA Forest Service to continue inventorying water quality of forest streams and monitor the effects on stream water chemistry.

Dr. Carol C. Dudding, Communication Sciences and Disorders, received **$375,000** from the Virginia Dept. of Education to provide a state-wide American-Speech-Language-Hearing Association accredited masters program in Communication Sciences and Disorders.

Ms. Carol A. Fleming, Outreach and Engagement, received **$13,500** from The Wolf Trap Foundation to join preschool and kindergarten teachers in the classroom to infuse the performing arts into their standard preschool and kindergarten lesson plans to support young children's social, emotional, physical, and cognitive development.

Dr. Diane L. Foucar-Szocki, Learning, Technology, & Leadership Education, received a total of **$400,000** from the Virginia Department of Education to serve students and their families after school, evenings and during summer recess; targeting populations of ESL students and low literacy and numeracy native speakers currently served in the school day program at Waterman, Keister, and Stone Spring Elementary Schools.

Dr. Mark L. Gabriele, Biology, received **$68,484** from the Commonwealth Health Research Board to provide needed insights concerning what factors are critical for establishing integrative auditory networks and if/how they are influenced/compromised by current/emerging approaches for treating the hearing impaired.

Dr. Norman E. Garrison, Biology, received **$5,000** from ADInstruments, Inc. to equip student workstations in physiology laboratories with the PTB151 Human Physiology System 1 that allows recording, analysis, and reporting of human cardiovascular, respiratory, muscle, and nerve experiments.

Dr. Clarence R. Geier, Sociology & Anthropology, received a total of **$167,873** from Carmeuse Lime & Stone to complete the Phase II and III levels of archaeology at Middletown, Virginia; to conduct an appropriate historical archaeological program to result in the location, description, and preliminary assessment of those prehistoric and historic sites lying within the project area; and to address the archaeological recovery, interpretation, analysis and report preparation for the archaeological sites that will be impacted by planned quarry construction; **$2,555** from the Highland County Historical Society to assist with the site archaeology at the Hull house in McDowell, Virginia and use the recovered artifacts as a basis for analyzing site stratigraphy, feature function and the identification of possible activity areas in the yard area; and with **Dr. Anna M. Courtier**, Geology & Environmental Sciences, **$36,234** from the Shenandoah Valley Battlefields Foundation to review historic and archaeological data that will be used to provide a context for the interpretation of prehistoric and historic cultural remains identified on the Ramseur's Hill Parcel and **$12,249** from the Virginia Department of Historic Resources to integrate a number of preservation oriented groups in an effort to more systematically and completely recover feature and material remains.

Dr. John R. Gentile, Integrated Science & Technology, received **$11,339** from the City of Harrisonburg to identify recreation activities that are harmful to water supply areas, assess recreation activities that can coexist with water supply areas, and distinguish areas within the watershed where recreation activities can occur without damaging the water supply.

Dr. John W. Gilje, Chemistry & Biochemistry, received **$243,000** from the Research Corporation to seek methods to further integrate undergraduate research experiences into the Chemistry & Biochemistry and Physics & Astronomy department curricula.

Dr. Joann H. Grayson, Psychology, received **$44,750** from the Virginia Department of Social Services to support production of the Virginia Child Protection Newsletter.

Ms. Ginger L. Griffin, Institute for Innovation in Health & Human Services, received **$345,806** from the Virginia Department of Social Services to raise awareness of the importance of proper social, emotional, and behavioral development of infants and toddlers; to provide professional training to child care providers on social, emotional, and behavioral development; and to create a screening system to determine the level of intervention needed for at-risk children.

Dr. Dan C. Halling, Communication Sciences & Disorders, received **$12,000** from the Virginia School for the Deaf and Blind to provide a graduate assistant from Communication Sciences and Disorders on the campus of VSDB.

Dr. Susan R. Halsell, Biology, received **$10,000** from The Jeffress Memorial Trust to investigate and identify molecules either controlled by or collaborating with RhoA signal transduction during remodeling of tissues such as the neural tube and during control of the cell cycle and cytokinesis in Drosophila.

Dr. Robert J. Harmison, Graduate Psychology, received **$ 800** from PsyMetrics, Inc. to assess the factor structure of the Winning Profile Athlete Inventory and to determine the instrument's reliability and predictive validity.

Ms. Kimberlee Hartzler-Weakley, Institute for Innovation in Health & Human Services, received a total of **$249,598** from the Virginia Department of Education to provide supplemental educational services to the children of migrant farm workers in collaboration with local school districts and to assess language and educational experience and progress of individual students; **$75,900** from the Virginia Department of Health to develop and implement a comprehensive plan to address non-marital births and unplanned pregnancies; **$ 2,103** from individual donors and **$8,535** from Page County to provide mobile literacy services to encourage early learning in the local community; **$25,000** from the College of Education, Learning Technology & Leadership to support literacy services; and **$7,286** from the Office on Children and Youth to support teen pregnancy prevention programming.

Dr. M. Hossain Heydari, Computer Science, received **$86,832** from the U.S. Department of Defense to lay the foundation for a computer forensics lab that can be utilized by students and faculty for educational purposes and to fully develop and offer an information security vulnerability assessment lab; and **$15,000** from the National Security Agency to manage the financial aid fund for the New Security Paradigms Workshop (NSPW).

Ms. Jane Hubbell, Institute for Innovation in Health & Human Services, received **$5,722** from Crossroads to Brain Injury Recovery, Inc. to provide services to individuals affected by brain injuries, maximizing rehabilitation and contributing to the community; with **Dr. Gary S. Race** (IIHHS), a total of **$580,418** from the Virginia Department of Health to improve campus based suicide prevention and intervention at Virginia institutions of higher education; and to assure the provision of comprehensive, essential health and support services for individuals and families with HIV infection; a total of **$20,208** from various sponsors and individual donors to provide mobile literacy services ; **$24,000** from the Harrisonburg-

Rockingham Community Services Board to provide interpretation services to non-English speaking clients; a total of **$52,293** from the Department of Behavioral Health and Development Services to provide service coordination and special instruction services through the Infant & Toddler Connection of Shenandoah Valley (ITCSV); **$11,106** from Grafton School, Inc. to provide a support employee during the transition period of ITC services; **$8,638** from the Community Resource Center to provide administrative services ; and a total of **$3,190** from the Harrisonburg Community Health Center to provide the use of university's facilities and services.

Dr. William C. Hughes, Physics & Astronomy, and **Dr. Brian H. Augustine,** Chemistry & Biochemistry, received **$44,000** from the National Science Foundation to encourage students to identify themselves as scientists through their participation in hands-on materials science research, their close interaction with faculty and other students, and their communication of their results both within the REU and at regional and national meetings.

Dr. Christine A. Hughey, Chemistry & Biochemistry, received **$14,671** from the National Science Foundation to acquire a triple quadrupole mass spectrometer for interdisciplinary research and teaching in Chemistry and Biology which will have a significant impact on the integrated research experience of undergraduate students.

Dr. Jessica G. Irons, Psychology, received **$16,987** from the Virginia Foundation for Healthy Youth to explore the extent to which behavioral healthcare providers address adolescent nicotine dependence, and determine the relationship between dependence, biochemical measures, and other variables.

Ms. Chelsea L. Jenkins, Virginia Clean Cities, received **$710,000** from the Environmental Protection Agency to improve air quality through the replacement and repowering of construction equipment engines to increase fuel efficiency.

Dr. Kia N. Johnson, Communication Sciences & Disorders, received **$5,000** from the American Speech-Language-Hearing Association to participate in a 2-day NIRS-DOT Visiting Fellowship course.

Dr. Ronald G. Kander, School of Engineering, received **$2,500** from the National Academy of Engineering to hold a series of workshops on campus for faculty members from the School of Engineering and partnering academic units; and **$9,885** from TECHLAB, Inc. to characterize the flow and pressure characteristics of two cassette designs leading to prototyping to demonstrate new design concepts.

Mr. Abram T. Kaufman, Facilities Management, and **Dr. Christie J. Brodrick Hartman,** Institute for Stewardship of the Natural World, received **$27,850** from the National Fish and Wildlife Foundation to create an outdoor "Green Pavilion" that demonstrates the use of sustainable technologies such as solar panels, wind turbines, and recyclable materials.

Dr. Robert A. Kolvoord, Center for STEM Education Outreach, received **$6,000** from The Scripps Research Institute to do a pilot study assessing the impact of the extensive use of GIS by students in the Geospatial Semester; **$25,035** in funding from the National Science Foundation through Northwestern University to design and execute a classroom-based study of student spatial thinking; **$8,700** from the Virginia Geographic Alliance to sponsor the 3rd National Summit on Geospatial Technologies in K-12, a two-day conference on the use of geospatial technologies across the K-12 curriculum, coupled with a two-day workshop on geospatial technologies for Virginia secondary geography instructors; **$499,818** from the National Science Foundation to develop and implement a research design for monitoring STEP implementation among four partners and to design and conduct an impact evaluation plan to collect data, track progress, and evaluate student outcomes.

Dr. Chris J. Koski, Political Science, received **a total of $149,794** from the National Science Foundation to research how policy disruptions associated with disasters and other extreme events affect governing in the United States.

Dr. Helmut Kraenzle with **Dr. Carole L. Nash**, Geographic Science Program, received **$25,000** from Shenandoah National Park to accomplish cultural resource work in Shenandoah National Park and provide valuable research experience for JMU students.

Ms. Susan F. Lamb, WMRA, received a total of **$51,617** from the Corporation for Public Broadcasting to provide community broadcast services; and **$158,369** from the CPB to provide a community service grant for public radio.

Dr. Chris S. Lantz, Biology, received **$20,000** from The Jeffress Memorial Trust to research immunity to the protozoan parasite *Leishmania major*.

Dr. Richard R. Lawler, Sociology & Anthropology, received **$133,638** from the National Science Foundation to determine how life history traits are influenced by genetic, sex-specific, and ecological factors in lemurs, a species with a slow life history schedule.

Dr. Reid J. Linn, The Graduate School, with **Ms. Cheryl L. Henderson**, **Dr. John T. McNaught**, and **Ms. Melinda B. Bright** , T-TAC, received a total of **$1,984,009** from the Virginia Department of Education to support statewide efforts and activities designed to enhance service effectiveness for personnel who serve children and youth with disabilities; and to support state directed activities of the Virginia Department of Education and the Training/Technical Assistance Centers.

Dr. LouAnn Lovin, Center for STEM Education Outreach, with **Ms. Judy B. Kidd**, Mathematics & Statistics, received a total of **$562,081** from the Virginia Department of Education to enhance teachers' content knowledge of the mathematics embedded within Virginia's 2009 K-3 and 4-6 Mathematics Standards of Learning (SOL) including vertical articulation from grade to grade.

Dr. Nick D. Luden, Kinesiology, received **$49,780** from an industry partner to thoroughly examine the efficiency of Active, an all-natural proprietary sports supplement that has been shown to improve performance and lactate handling.

Dr. Christy L. Ludlow, Communication Sciences & Disorders, received **$73,647** from the National Institutes of Health through Emory University to develop and validate tools to diagnose Spasmodic Dysphonia; measure severity, and determine the impact of SD on disability and quality of life via a multi-center clinical study; and **$5,577** from Medtronic ENT to provide services as a Consulting Director.

Dr. Victoria L. Mariani, Chemistry & Biochemistry, received **$10,000** from The Jeffress Memorial Trust to provide greater insight into how the subtle differences in primary structure confer to protein stability.

Dr. Carla D. Martin, Mathematics & Statistics, received **$113,229** from the National Science Foundation to advance both theoretical and computational multilinear algebra via several newly developed tensor constructions.

Dr. Jason W. Martin, Mathematics & Statistics, received **$49,766** from the Department of Defense to optimize the assembly level code of the gnu multi-precision library for the itanium2 processor architecture.

Dr. Jeanne M. Martino-McAllister, General Education, received **$1,000** from the Prevention Research Center to determine the extent to which AlcoholEdu, an on-line population-level alcohol prevention program, reduces student alcohol consumption and risky behaviors.

Dr. Merle E. Mast, Nursing, received **$42,680** from the Harrisonburg Community Health Center to provide care for clients at the Center.

Dr. Lisa M. Maynard, School of Music, received **$2,125** from The National String Project Consortium to create assistantships for undergraduate String Music Education majors from JMU to gain hands-on teaching experiences while offering string instrument lessons to school age students from the Harrisonburg and Rockingham communities.

Dr. Robert L. McKown, with **Dr. Ronald W. Raab**, Integrated Science and Technology, received a total of **$100,996** from the National Institutes of Health to optimize lacritin's cyroprotective activity and understand its mechanism of action; and to continue work on the development of syndecan-1 deletion and point mutants to further elucidate the nature of the lacritin cell surface binding complex; and with **Dr. Ronald W. Raab, $36,984** from EyeRx Research, Inc. to demonstrate that lacritin has properties to cure established infections in a rabbit model and to investigate the potential for lacritin as a preservative in topical eye drops.

Dr. Jonathan J. Miles, Integrated Science & Technology, received a total of **$334,131** from Virginia

Department of Mines, Minerals and Energy to provide administration, management, and consultancy services to DMME in support of small wind projects in the state; and to continue implementing the Wind Powering America program; **$10,000** from the National Science Foundation to research development of coastal and offshore renewable energy, and collaborate with the Virginia Coastal Energy Research Consortium (VCERC) with an initial focus on offshore winds, waves, and marine biomass; and with **Dr. Maria C. Papadakis**, Geographic Science Program, a total of **$63,750** from the U.S. Department of Energy to support the development of wind power in Virginia-onshore, offshore, large, small, and community scale, by engaging in varying activities in a 3-year strategic plan.

Dr. Kevin P. Minbiole, Chemistry & Biochemistry, received **$10,000** from The Jeffress Memorial Trust to further expand the knowledge and understanding of the complex relationship of mutualistic symbionts and microbial ecology; **$1,626** from DuPont Crop Protection to synthesize biologically relevant natural products and related structures for testing and evaluation of properties useful for agricultural and horticultural crop protection agents; and with **Dr. Gina MacDonald**, **Dr. Debra L. Mohler**, and **Dr. Daniel M. Downey**, Chemistry & Biochemistry, and **Dr. Reid N. Harris**, Biology, received **$299,810** from the National Science Foundation to acquire a LCMS system to enhance undergraduate research at JMU and Mary Baldwin College.

Mr. Kenneth F. Newbold, Jr., Research & Public Service, with **Dr. Jeffrey D. Tang**, Integrated Science & Technology, received **$2,687,504** from the U.S. Department of Energy through the Virginia Department of Mines, Minerals and Energy to lead a coalition of partners including the State of Virginia, Virginia Clean Cities at James Madison University, Alliance AutoGas (a team comprised of Blossman Gas, American Alternative Fuel, and Alliance AutoGas Conversion Centers), vehicle fleets in the southeastern states of Virginia, Maryland, Tennessee, South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana, Clean Cities Coalitions, the Propane Education and Research Council, and MSM Communications to convert up to 1200 vehicles to be propane powered; install propane refueling infrastructure to support each participating fleet; leverage existing propane facilities of Alliance Autogas members to create a Southeastern refueling corridor in order to market the availability of such fuel to the public; create a marketing, education and an outreach campaign to inform the public of the advantages of propane as a transportation fuel and promote use of propane refueling facilities; collect critical data related to the transition and operation of propane fleets; and host training for mechanics/technicians, first responders, drivers, and other appropriate audiences; and with **Dr. Christie J. Brodrick Hartman**, Institute for Stewardship of the Natural World, **$205,329** from Virginia Clean Cities, Inc. to reduce petroleum consumption in the transportation sector by advancing the use of alternative fuels and vehicles, idle reduction technologies, hybrid electric vehicles, fuel blends, and fuel economy.

Dr. John B. Noftsinger, Research & Public Service, received **$47,077** from the Shenandoah Valley Technology Council to support the SVTC, which serves as an advocate for developing the technological and workforce development infrastructure required to support technology-related industries in the region and with **Mr. Kenneth F. Newbold, Jr.**, RPS, received **$1,162,776** from I2, Inc. to provide a Visual Investigative Analysis Software License; with **Mr. Donald R. Sullenberger** III, Shenandoah Valley Partnership, received **$206,810** from the SVP to provide quality economic development support services for its regional members, to prospects, existing business, and the Virginia Economic Development Partnership; with **Dr. Ronald G. Kander**, School of Engineering, and **Dr. Malcolm G. Lane**, Computer Science, **$1,030,338** from the National Institute of Standards and Technology through George Mason University to study policy, legal and technical issues related to critical infrastructure protection and to expand and test new concepts in resiliency and disaster recovery and response; and **$2,000** from the Verizon Foundation to provide sponsorship of the innovation in K-12 Education at the Shenandoah Valley Technology Council Gala.

Dr. Maria C. Papadakis, Geographic Science Program, received **$179,888** from the Environmental Protection Agency to assess the feasibility of achieving significant reductions in energy consumption (kBTU) and GHG emissions using a set of low cost, no cost, and short payback best practices.

Dr. Eric C. Pappas, with **Dr. Olga Pierrakos**, **Dr. Robert J. Prins**, **Dr. Bradley A. Striebig**, School of Engineering, and **Dr. Steven R. Harper**, College of Business, received **$150,000** from the National Science Foundation to integrate instruction in sustainability, to develop innovative developmental hands-on instructional methodologies for teaching sustainability, and to develop methods for evaluating sustainability assignments that support the development of students' design competencies, cognitive processes, and life long learning skills.

Dr. Scott A. Paulson, Physics & Astronomy, received **$10,000** from The Jeffress Memorial Trust to correlate the atomic level of structure of double-walled carbon nanotubes (DWNTs) with their device performance.

Dr. Olga Pierrakos, School of Engineering, with **Dr. Karim Altaii**, ISAT, received **$495,815** from the National Science Foundation to acquire experimental flow diagnostics instrumentation for characterization of complex flows.

Dr. Brianna Quinn, Exceptional Education, received **$23,720** from the Virginia Department of Education to develop and deliver courses via distance education, expand student participation, and carry out administrative responsibilities for the Visual Impairments Consortium.

Mr. Gary S. Race, Institute for Innovation in Health and Human Services, received **$12,250** from the Rockingham Memorial Hospital Foundation to develop and implement a training module for the Spanish speaking immigrant populations in order to increase knowledge about alcohol and substance abuse as well as treatment resources in the community; and with **Ms. Jane Hubbell**, IIHHS, a total of **$170,820** from Valley Aids Network to provide educational and health administrative services; with Mr. Christopher B. Nye, Blue Ridge AHEC, a total of **$79,436** from Virginia Commonwealth University to promote health careers and access to primary care for medically underserved populations through community academic partnerships; a total of **$471,717** from the Virginia Department of Health to design, direct, implement, and evaluate the Virginia WISEWOMAN/Every Woman's Life (EWL) project which focuses on adding preventive health services such as nutrition and physical activity to EWL breast and cervical cancer screening services; extract pertinent contents in English from the Hispanic Low Literacy Materials and format it so that it can be uploaded to the Virginia Department of Health website; to provide management services and implement the Spanish Bilingual Assistant Training Grants Program; to work with the Home Visiting Consortium to identify the core Virginia Home Visiting Training and to plan for training all Virginia Home Visitors on core competencies, and provide training development and provisions for the Home Visiting Consortium; to provide the position of Health Education/Communication Coordinator to coordinate the public education, professional development and recruitment components of Every Woman's Life; to work with the Home Visiting Consortium to identify the core Virginia Home Visiting training and to plan for training all Virginia Home Visitors on core competencies; and to assist the VDH Office of Dental Health in the development and implementation of training for home visitors; and **$1,704** from the First Presbyterian Church to support the Community Health Interpreter Services.

Dr. Vicki A. Reed, Communication Sciences & Disorders, received **$45,500** from the Scottish Rite Foundation of Virginia to continue support of the JMU-Scottish Rite Language Disorders Clinic; and **$10,000** from Eastern Virginia Medical School to provide students with a clinical learning experience at EVMS; and **$10,575** from Individual Donors to provide intensive communication intervention for children who have a diagnosis of autism or Pervasive Developmental Disorder.

Mr. Henry A. Reeves, Small Business Development Center, received a total of **$9,750** from Rockingham County to provide technical advice and guidance for small businesses; **$500** from Highland County to support the Small Business Development Center; **$5,000** from the City of Harrisonburg to support the Small Business Development Center; **$1,500** from Page County to support the Small Business Development Center; and **$440,523** from the U.S. Small Business Administration to provide technical advice and guidance and to serve as a business and economic information focal point for small businesses.

Dr. Robert D. Reid, Institute of Certified Professional Managers, received **$247,000** from the

Institute of Certified Professional Managers to maintain the organization's national headquarters on the campus of James Madison University.

Dr. J. Barkley Rosser, Jr., Economics, received **$36,500** from the Journal of Economic Behavior and Organization to support the Journal of Economic Behavior and Organization at James Madison University.

Dr. Kenneth R. Rutherford, Mine Action Information Center, received **$70,992** from the Fibertek, Inc. to produce and distribute a body of literature describing current initiatives related to humanitarian mine-action technology.

Dr. Michael J. Saunders, Kinesiology, received **$36,995** from the Shaklee Corporation to determine the efficacy of a high-carbohydrate, low-protein beverage on muscle recovery following heavy endurance exercise.

Dr. Sean T. Scully, Physics & Astronomy, received **$11,600** from the NASA Goddard to probe the high redshift intergalactic background light (IBL) at optical and UV wavelengths.

Dr. James M. Shaeffer, Outreach and Engagement, received **$51,502** from the New College Institute to develop and administer an undergraduate adult degree program leading to a Bachelor's Degree from JMU, with course instruction being provided on-site and through distance technologies; and **$21,131** from the U.S. Army to provide a distance learning course, Strategic Communication: Analysis of Persuasion and Cultural Principles and Techniques, to Army personnel.

Sgt. William L. Simmons, with **Sgt. Margaret A. Campbell**, Department of Public Safety/Police, received **$ 739** from the National Automobile Dealers Charitable Foundation and **$500** from Wal-mart to provide training to police officers and community members in First Aid/CPR/AED.

Dr. Kristen E. St. John, Geology and Environmental Science, received **$30,626** from the National Science Foundation to develop a suite of teaching materials designed to cover the key concepts surrounding the use of ocean sediment cores for interpretation of past climate changes and new core data and interpretations from Arctic and Antarctic drilling expeditions that provide evidence of rapid and cyclic Cenozoic climate change.

Dr. Lee G. Sternberger, with **Dr. Jennifer Coffman**, International Programs, **Dr. Giuliana Fazzion** and **Dr. Brillian Muhonja**, Foreign Languages, Literature, and Cultures, and **LTC. Robert E. Pettit, III**, Military Science, received **$285,000** from the Institute of International Education, Inc. to improve the language skills and regional expertise of future military officers through the ROTC Dukes Battalion and strengthen the Department of Foreign Language, Literatures and Cultures, particularly in Swahili language offerings.

Ms. Lynne F. Stover, Center for Economic Education, received **$6,625** from the Council on Economic Education to provide an opportunity for area classroom teachers, grades 3-7, to receive instruction on implementing a Mini-Economy program in their classrooms.

Col. Nick D. Swayne, College of Education, received **$200,000** from the State Council of Higher Education for Virginia (SCHEV) to establish an enduring and sustainable mentoring program between content experts and participating elementary school teachers from their school divisions; and **$30,000** from the Rockwell Collins Charitable Corporation to help promote growth of the FIRST LEGO League in Washington, D.C., as well as in rural areas and school divisions with Title 1 designation.

Dr. Louise M. Temple, with **Dr. Stephanie B. Stockwell**, Integrated Science and Technology, and **Dr. Ronald G. Kander**, School of Engineering, received a total of **$264,746** from the National Science Foundation to establish a microarray teaching and learning center at James Madison University to support curricular innovations at a consortium of regional colleges in the Shenandoah Valley, and develop a proposal for a Research Experience for Undergraduates and plan for a workshop or other medium for the purpose of addressing common goals in science education; and a total of **$30,974** from the National Institutes of Health to define and explore the constellation of virulence factors of B. pertussis and to develop tissue and/or organ culture models for studying toxicity of B. avium; and to create novel strains of B. avium by constructing deletion mutants of candidate virulence associated genes in order to determine their roles in colonization and/or toxicity to epithelial tissues and to develop and use adult tracheal tissues as tools for the characterization of tracheal responses to bacterial factors.

Dr. Karin L. Tollefson-Hall, Career Development Academy, received **$ 500** from the Arts Council of the Valley to provide quality art materials and arts activities for children of families with limited English skills and limited economic opportunities.

Dr. Anthony L. Tongen, with **Dr. Laura A. Taalman** and **Dr. Paul G. Warne**, Mathematics & Statistics, received **$27,499** from the Mathematical Association of America to continue the M3 summer program to foster mathematical development and personal mentorship.

Dr. Leonard A. VanWyk, Mathematics & Statistics, received **$315,520** from the National Science Foundation to provide a summer Mathematics REU program that would provide a more synergistic research experience for Mathematics & Statistics majors and would complement the current REU programs.

Dr. Steven J. Whitmeyer, Geology and Environmental Science, received **$18,115** from the U.S. Geological Survey to support geologic mapping and stratigraphic anaylses of the eastern half of the Luray 7.5' quadrangle, Virginia.

Dr. Jacqueline A. Williams, Kinesiology, received **$36,000** from the Virginia Department of Education to provide funding for a high-quality health and physical education content/teaching summer institute.

Dr. James W. Wilson, Integrated Science and Technology, received **$2,813** from the University of Leicester, UK to pioneer innovative approaches to develop best pedagogic practice for the learning and teaching of spatial literacy.

Mr. William R. Wilson, Madison Institutes, received a total of **$ 266,877.44** from the Center for Civic Education to implement the annual National Elementary We The People Institute, to be hosted at JMU; the week-long National High Needs High School We The People Institute; to coordinate the state's efforts to implement the Project Citizen curriculum; and to build upon the expansion and enhancement efforts for the Madison Institute's Project Citizen.

Dr. William C. Wood, Center for Economic Education, received **$77,237** from the Shenandoah Valley Economic Education, Inc. to provide school systems of Harrisonburg and Rockingham County with economic teacher consultation, training, and assistance with materials; and **$10,444** from the Virginia Council on Economic Education to provide a training program that prepares high school teachers to teach an economic and personal finance course.

Dr. Grace A. Wyngaard, Biology, received **$1,265** from Ohio University to explore learning activities suited to large classrooms that channel the hidden curiosity and intrinsic motivations students may already possess; and **$3,200** from the Smithsonian Institution to study Copepods.

Dr. Yanjie Zhang, Chemistry & Biochemistry, received **$20,000** from The Jeffress Memorial Trust to design appropriate model systems for biomineralization that will help disentangle the complicated interactions at the protein-biomineral interface.

Dr. Rhonda M. Zingraff, with **Ms. Jane Hubbell** Institute for Innovation in Health and Human Services, and **Dr. Richard E. Ingram**, College of Education, received a total of **$1,435,627** from the Virginia Department of Health to develop and produce resource materials to support underserved mothers and children with healthier food options and encourage them to adopt healthy habits; and to add children's health information to the Virginia Department of Health's website.

Dr. Robert H. Zullo, Kinesiology, received **$787** from the National Collegiate Athletic Association to forge a relationship between the National NCAA 2009 Convention and the JMU Sport & Recreation Management graduate program and undergraduate programs; and sponsorship of all entrance fees, lodging, and meals costs associated with the student participation in the TEAMS 2009 Conference in New Orleans, LA. ♦

"It takes a trained and discerning researcher to keep the goal in sight, and to detect evidence of the creeping progress toward it."
~John C. Polanyi
Speech to the Empire Club of Canada
November 27, 1986

OSP COMPLIANCE ACTIVITIES & OUTREACH

Sponsored Programs staff members provide regulatory compliance support and assistance to individuals applying for external funding and act as administrative liaisons between the university's appointed IRB and IACUC committees and individual researchers. The following charts show the volume of IRB and IACUC activity at the university for the 2009-2010 Academic Year.

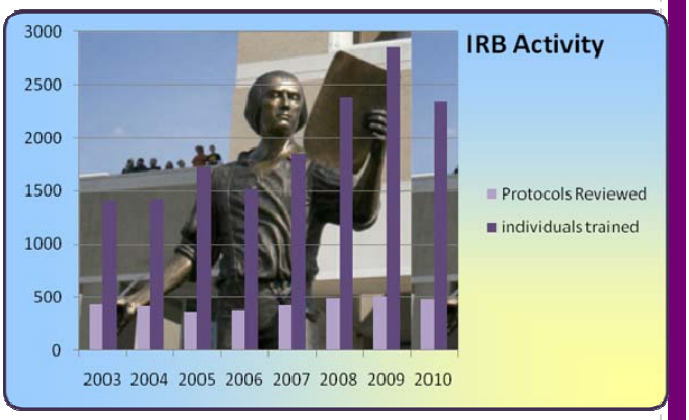
Additionally, during the previous academic year, the OSP also introduced training for the Responsible Conduct of Research (RCR) to comply with mandated federal sponsor guidelines which promote integrity in the proposing, planning, conducting, reporting, and reviewing of research. During the initial rollout of the RCR training, 190 individuals completed training in the responsible conduct of research. The university entered into the Collaborative Institutional Training Initiative (CITI) to provide RCR training in addition to

Three basic principles, among those generally accepted in our cultural tradition, are particularly relevant to the ethics of research involving human subjects: the principles of respect of persons, beneficence and justice.

~ The Belmont Report, 1979

Institutional Research Board (IRB)

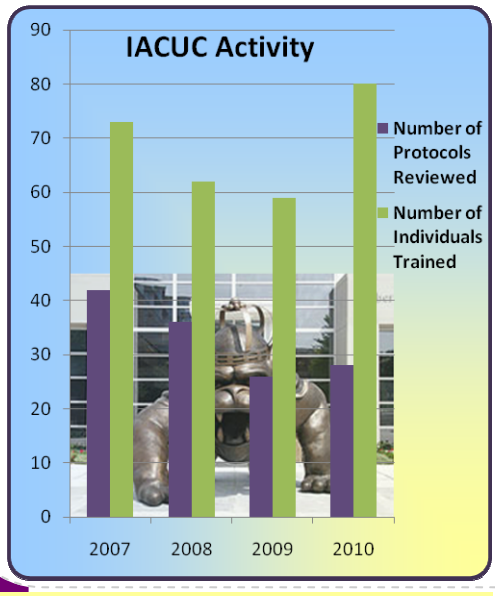
During the 2009-2010 Academic Year, OSP staff coordinated the review, editing, distribution, and approval process of 485 Human Research protocols and provided training for 2,333 investigators in the responsible and ethical conduct of human research. The chart at the right shows the volume in IRB activity at the university over the past eight years. ♦



8 Year Activity for Institutional Review Board

" Scientists, therefore, are responsible for their research, not only intellectually but also morally. This responsibility has become an important issue in many of today's sciences…."

~ Fritjof Capra, The Turning Point, 1982



Institutional Animal Care & Use Committee (IACUC)

The OSP also administers all institutional care and use (IACUC) activity and bi-annual laboratory inspections at the university to ensure federal animal care and use regulations are observed in animal laboratories. During FY 10, training was provided for 80 investigators and individuals in humane care and use of animals in research, and 28 protocols were reviewed. During the same period in FY09, 59 investigators were trained and 26 protocols were reviewed. The OSP also prepares and provides the Annual Report to the Office of Laboratory Animal Welfare (OLAW) to comply with internal and external regulatory policies. ♦

4 Year Activity for Animal Care & Use Committee

Office of Sponsored Programs

The OSP homepage can be accessed at the following URL:

www.jmu.edu/sponsprog/

For details on other aspects of sponsored programs, contact our office

(540) 568-6872