Funding News and Notes
Recognition Issue

FUNDING HISTORY

JMU Investigators Secure Funding Exceeding $21 Million in FY2012

Fiscal year 2012 (FY12) proved to be a stagnant year for James Madison University (JMU) in terms of externally funded activities. Though JMU faculty, students, and staff submitted a total of 424 proposals for external funding, more than ever before, funding sources have declined, reflective of the anemic economy. During the same period, 277 funding applications were selected to receive external funding. Our personnel attained a 65% funding success rate. The focused efforts of over 195 faculty, staff, and students within the JMU community have brought in total external funding of $21,450,410 during the period July 1, 2011 through June 30, 2012.

Notably, involvement in the pursuit of external funding involves numerous collaborations across disciplines and among organizations outside of the university community.

Since FY2001 (12 years), JMU faculty and staff have submitted 4,100 funding applications and won 2,886 awards, earning $261,868,956 towards research, instruction, equipment acquisition, and public service and outreach operations. The university’s achievements in sponsored project funding are a testament to faculty and staff efforts to augment resources for scholarly and creative endeavors. The graph below charts the progress in awards.

JMU personnel increased sponsored funding from $14,036,811 in FY 2001 to $21,243,497 in FY2005. 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. The American Recovery and Reinvestment Act (ARRA) funded 8 awards in FY10, earning $6,223,117 of federal stimulus funding for the university. Funding has declined slightly since the ARRA funding tapered off. Since FY09, the university administration’s emphasis on sustainability and conservation-related activities has resulted in numerous proposals and awards. During FY12, investigators submitted 24 proposals and won 13 awards totaling $1,328,100 to support environmental sustainability activities.

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FY 2012 Quick Facts:
- 277 awards
- 424 submissions
- 195 Faculty and Staff Investigators
- 65% success rate
- The U.S. Department of Education was the largest federal sponsor at $4,088,503
- The U.S. Department of Education funded the most numerous projects at 21
- $21,450,410 in awards

“I can assure you, public service is a stimulating, proud, and lively enterprise. It is not just a way of life; it is a way to live fully.”

-Lee H. Hamilton, current member of the U.S. Homeland Security Advisory Council
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, Virginia city/county, non-Virginia government, and university. A total of 277 funding proposals were awarded in FY12. The majority of awards, both in number and in total award amount, came from the federal government either as direct assistance or as flow-through to Virginia State agencies. Combined, federal and state funds represented 76% of the overall total awards ($16,317,242) compared to their combined portion in FY11 of 84% or $18,945,758 of the FY11 total.

Various sectors of activity at the university make up the portfolio of externally sponsored activities. **Public Service & Outreach** is a significant focus of externally funded projects at 32% of all funding received and representing 96 projects. **Research**, at 24% of all funded projects, supports 94 ongoing projects at the university. **Instruction** represents 21% of funding and supports 35 projects; **Continuing Education** supports 8 projects and represents 3% of total activity. There were no **Equipment Acquisitions** as a result of external funding this year. A large sector of activity is that of **Other** at 20%, which represents 44 projects and a variety of sponsored activities which do not correspond to any of the preceding categories.
### All Colleges and Divisions Augment Resources

<table>
<thead>
<tr>
<th>College or Division</th>
<th>Awards</th>
<th>Submissions</th>
<th>Award Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Affairs</td>
<td>7</td>
<td>11</td>
<td>$602,758</td>
</tr>
<tr>
<td>Research and Public Service</td>
<td>24</td>
<td>32</td>
<td>$4,204,873</td>
</tr>
<tr>
<td>The Graduate School</td>
<td>7</td>
<td>8</td>
<td>$1,953,433</td>
</tr>
<tr>
<td>Administration and Finance/Office of President</td>
<td>4</td>
<td>8</td>
<td>$50,793</td>
</tr>
<tr>
<td>College of Arts and Letters</td>
<td>13</td>
<td>27</td>
<td>$1,246,995</td>
</tr>
<tr>
<td>College of Science and Mathematics</td>
<td>51</td>
<td>104</td>
<td>$2,413,750</td>
</tr>
<tr>
<td>College of Visual and Performing Arts</td>
<td>2</td>
<td>5</td>
<td>$6,100</td>
</tr>
<tr>
<td>College of Business</td>
<td>10</td>
<td>14</td>
<td>$1,133,485</td>
</tr>
<tr>
<td>College of Education</td>
<td>20</td>
<td>23</td>
<td>$2,247,239</td>
</tr>
<tr>
<td>College of Integrated Science and Technology</td>
<td>131</td>
<td>176</td>
<td>$7,418,416</td>
</tr>
<tr>
<td>Science, Technology, Engineering &amp; Math</td>
<td>8</td>
<td>16</td>
<td>$172,568</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>277</strong></td>
<td><strong>424</strong></td>
<td><strong>$21,450,410</strong></td>
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</table>

“The outcome of any serious research can only be to make two questions grow where only one grew before.”

- Thorstein Veblen, Economist

“Good design begins with honesty, asks tough questions, comes from collaboration, and from trusting your intuition.”

- Freeman Thomas, American automobile and industrial designer

The awards obtained by JMU faculty and staff range in type, including research, public service/outreach, continuing education and instruction development, as well as equipment acquisition. This year saw another increase in collaborative activity involving multidisciplinary projects, inter-institutional collaborations, and private and industry partnerships as researchers reached out to colleagues in other departments, sister institutions, and private funding sources to construct increasingly complex funding proposals. The variety of funding applications involving multiple disciplines is unprecedented.

The table above, shows the total awards earned by each college or division, the numbers of proposal submitted, total funded value and the percentage of the total awards. The College of Arts and Letters received $1,246,995, or 5.81% of total funding received an increase over the prior year. The College of Integrated Science and Technology (CISAT) earned $7,418,416 during the year. CISAT’s external awards represent 34.58% of the total funding received for the year. The College of Science and Mathematics totals were $2,413,750, or 11.25% of the total amount earned in FY12. The College of Education brought in $2,247,239, or 10.48% of the total awards during FY12, a substantial increase over FY11. College of Business investigators earned $1,133,485 in awards, also an increase over FY11. The Graduate School brought in $1,953,433, or 9.11% of total funding. Research and Public Service brought in $4,204,873, or 19.60% of all funding received. Science, Technology, Engineering & Mathematics (STEM) obtained $172,568, or .08% 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 obtained $659,651 in total external funding received during FY12.
Ms. Emily K. Akerson, Institute for Innovation in Health and Human Services, received with Ms. Jane Hubbell, Institute for Innovation in Health and Human Services, a total of $46,492 from the Shenandoah County Department of Social Services, a total of $114,819 from the Virginia Department of Social Services to continue to meet the needs of at-risk families in Page and Shenandoah Counties; and a total of $3,360 from the Shenandoah County Community Service Act (CSA) to continue to meet the needs of at-risk families in Shenandoah County by providing education, resources, and support; a total of $36,880 from private/non-profit sponsors to provide intensive home visiting and community outreach in Page and Shenandoah Counties with the goal of preventing child abuse and neglect, improving maternal and child health, and promoting positive parenting outcomes; and $9,210 from the Valley Program for Aging Services, Inc. to provide educational and administrative services.

Dr. John T. Almarode, Early, Elementary, and Reading Education, received $228,000 from the Virginia Office of the Governor to support the planning and development process for the implementation of a partnership laboratory school.

Dr. Elizabeth A. Arnold, Mathematics and Statistics, received $5,525 from the Mathematical Association of America to fund a conference for girls in grades 7-10 with follow-up activities to stimulate the participants’ interest in math, to provide them with female scientist role models, and to foster awareness of opportunities in math and science-related careers.

Dr. Brian H. Augustine, Chemistry & Biochemistry, with Dr. William C. Hughes, Physics & Astronomy, received a total of $69,959 from the National Science Foundation to research the kinetics and surface modification of Nanocomposite Polymer Thin Films; and to continue to develop microfluidic kits that can be used in high school classrooms to demonstrate standard chemical processes such as acid-base or precipitation reactions on the microscale and laminar flow in low Reynolds number microfluidic environments.

Dr. George H. Baker, Institute for Infrastructure and Information Assurance, received $30,720 from an industry collaborator to provide Subject Matter Expert support services in Electromagnetics for Balanced Survivability Assessments.

Dr. Adriana L. Banu, Physics & Astronomy, received $25,000 from The Jeffress Memorial Trust to study the experimentally unknown cross section of the $^{22}\text{Mg}(a,p)^{25}\text{Al}$ reaction at astrophysical relevant energies by measuring the time-inverse reaction $^{25}\text{Al}(p, a)^{22}\text{Mg}$ in inverse kinematics.

Dr. Susan K. Barnes, Early, Elementary, and Reading Education, received $37,593 from the Virginia Department of Education organize an interdisciplinary, collaborative forum for the ongoing development and networking of professionals who provide in-service and pre-service professional development to personnel focusing their work on all young children, ages birth to eight years.

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

Dr. Thomas R. Benzing, Integrated Science and Technology, received $1,460 from DuPont for student interns to assist in an ecological study that seeks to understand the fate and effects of mercury on the South River and its associated ecosystem; and $151,761 from the Department of Conservation & Recreation to assist the agency in meeting its Chesapeake Bay Total Maximum Daily Load (TMDL) responsibilities and implementing local nonpoint source TMDL requirements.

Dr. Cheryl L. Beverley, Learning, Technology, and Leadership Education, received $295,622 from the U.S. Department of Education to provide accelerated, alternative teacher preparation and traditional professional development to increase the number of highly qualified and effective middle grade science and mathematics teachers in Hopewell City Public Schools.

Dr. Amanda G. Bieseker, Integrated Science and Technology, received $10,000 from The Jeffress Memorial Trust to investigate both the potential direct effect of dengue E protein on chondrocytes, as well as a potential indirect effect of dengue E protein on chondrocytes.

Dr. David F. Brakke, College of Science and Mathematics, received $25,000 from the U.S. Fish and Wildlife Service to rank brook trout habitats in West Virginia and Maryland on resiliency to climate change; and $60,000 from the USDA Forest Service to investigate the watershed fragmentation, condition, and risk of the non-national forest lands in subwatersheds that include national forest lands.
Dr. Jo Anne Brewster, Graduate Psychology, received a total of $9,900 from the Society for Police and Criminal Psychology to perform administrative tasks for the Society.

Dr. B.J. Bryson, Social Work, received $185,734 from the Virginia Department of Education to improve academic achievement and college readiness of Waynesboro High students by focusing on environmental education that supports in-school content.

Dr. Florian P. Buchholz, with Dr. M. Hossain Heydari, Computer Science, received $916,714 from the National Science Foundation to provide scholarship support for undergraduate students for a Bachelor of Science degree in Computer Science and Information Security certification and to provide scholarship support for graduate students for a Master’s degree in Computer Science with a concentration in Digital Forensics.

Dr. Harold M. Butner, Physics & Astronomy, received $35,474 from NASA to continue analysis of DEBRIS survey with analysis of the Herschel data.

Dr. Corey L. Cleland, Biology, received $10,000 from The Jeffress Memorial Trust to understand the principles by which sensory information is used to program movements.

Dr. Christopher G. Clinard, Communication Sciences and Disorders, received $20,000 from the National Organization for Hearing Research Foundation to understand how aging affects the perception and neural representation of frequency.

Dr. Anca Constantin, Physics & Astronomy, received $35,000 from Research Corporation to quantify the rate at which mega-masers are hosted by the whole variety of optical spectral classifications observed in the nearby universe and to reveal the most statistically significant connections between mega-maser emission and its host optical properties; and $10,000 from The Jeffress Memorial Trust to identify the physical conditions that show the strongest links to maser activity, and thus to provide efficient criteria for mega-maser hunting.

Dr. Steven G. Cresawn, Biology, received a total of $26,704 from the National Institutes of Health to further the development of a database to hold mycobacteriophage genome sequences and gene expression data.

Ms. Penelope Critzer, Shenandoah Valley Child Development Clinic, received $310,000 from the Virginia Department of Health and $77,637 from the Virginia Department of Education to support the education programs of the Child Development Clinic.

Dr. David B. Daniel, with Dr. Krisztina V. Jakobsen, Psychology, received $2,500 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. Arthur T. Dean, II, Office of Diversity, received $25,000 from the Jessie Ball duPont Fund to extend the professor-in-residence program to the middle school level.

Dr. Laura Desportes, Exceptional Education, received $35,848 from the Virginia Department of Education to provide support for training clinical faculty for an approved educator preparation program, 5 year ECSE MAT program.

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, with Dr. Gina MacDonald, Chemistry & Biochemistry, received $109,442 from the National Science Foundation for a summer Research Experiences for Undergraduates (REU) program to provide undergraduate chemistry research students with the opportunity to develop improved communication tools and methods in science, as well as enhance day-to-day communication between hearing and deaf students; a total of $20,000 from the USDA Forest Service to continue inventorying water quality of Forest Streams and monitor the effects on stream water chemistry; and $10,000 from the Virginia Department of Game and Inland Fisheries to provide analyses of the water chemistry of Little Tumbling Creek for two years post liming and to provide water and sediment chemistry analyses of Lake Keolee.

Dr. Carol C. Dudding, Communication Sciences and Disorders, received $280,000 from the Virginia Department of Education to provide an American-Speech-Language-Hearing Association accredited masters program in Communication Sciences and Disorders.

Dr. L. Scott Eaton, Geology and Environmental Science, received $29,200 from the Virginia Department of Mines, Minerals and Energy to support landslide hazard mapping of Page County, Virginia.

Dr. Judith A. Flohr, Kinesiology, received $3,000 from The LPGA Foundation to support the LPGA-USA Girls Golf program at James Madison University.

Dr. Diane L. Foucar-Szocki, Learning, Technology, and Leadership Education, received a total of $800,000 from the Virginia Department of...
Education to offer English Literacy Civics services to area immigrants and refugees for their achievement of English language proficiency and civic understanding; to establish the Smithland Community Learning Center, linking the Big Brothers Big Sisters AMP IT UP Academic Mentoring Program and the Career Development Academy Adult and Family Learning Center for quality out-of-school, extended day programming; to implement new efforts targeting English (reading/writing) with the intention of removing Thomas Harrison Middle School from English and School Improvement status and strengthening the community learning center efforts for enduring sustainability; and to establish a Community Learning Center at Skyline Middle School.

Dr. Mark L. Gabriele, Biology, received $320,135 from the National Institutes of Health to determine how Eph receptors and ephrins guide patterned auditory circuit formation, to test their functional importance, and to apply mechanisms learned to fields of plasticity, recovery, and regeneration.

Dr. Steven T. Garrett, Mathematics and Statistics, received $27,527 from the U.S. Consumer Product Safety Commission to perform priority statistical analysis issues as a Survey Statistician with the CPSC.

Dr. Clarence R. Geier, Sociology and Anthropology, received $8,247 from the Shenandoah Valley Battlefields Foundation to oversee the field research program and coordinate preparation of the report of findings for the preliminary Phase I archeological and historical surveys of the Island Farm parcel east of Strasburg, VA; and a total of $128,057 from Carneuse Lime & Stone to assess the remaining, currently forested, parcels of land of the Middle Marsh Tract west of Middletown, VA, Nieswander's Fort, and Wesley Merritt's Cavalry Camp; to finish the Phase I project at the Middle Marsh locale by cataloguing artifacts recovered and preparing a final report of findings; complete a Phase I archeological survey of the area; and to assess the remaining, currently forested, parcels of land west of Middletown, VA, Nieswander's Fort, and Wesley Merritt's Cavalry Camp.

Dr. John R. Gentile, Integrated Science and Technology, received $12,000 from the USDA Forest Service to monitor wilderness resource conditions related to visitor use levels and patterns through inventory of recreation site (campsite) conditions in the St. Mary's and Ramsey's Draft Wildernesses within the George Washington National Forest.

Dr. John W. Gilje, Chemistry & Biochemistry, received $94,000 from the Research Corporation to seek methods to further integrate undergraduate research experiences into the Chemistry and Physics department curriculum.

Dr. Heather Griscom, Biology, received $10,000 from The Jeffress Memorial Trust to determine the competitive hierarchy of the American chestnut, Northern red oak, and tulip poplar and if the response of chestnut hybrids to environmental factors differ significantly from the response of pure chestnuts.

Dr. Patty J. Hale, Nursing, received $26,994 from the U.S. Department of Health and Human Services to apply for traineeship funding to support current and future students in the JMU nursing graduate program.

Mr. Michael D. Hall, Psychology, received $18,677 from DCS Corporation to collect data sets that will support the validation of the resynthesized stimuli against naturally occurring acoustic stimuli.

Dr. Linda C. Halpern, University Studies, received $40,000 from the Association of American Colleges & Universities to increase the number and explore more fully the success of Blue Ridge Community College students who transfer into two educational areas of need at JMU: teacher education/interdisciplinary Liberal Studies (IDLS) and selected STEM majors.

Mr. Alleyn S. Harned, Virginia Clean Cities, with Mr. Kenneth F. Newbold, Jr., Research and Public Service, received a total of $425,159 from the Virginia Department of Mines, Minerals and Energy to advance a collaborative electric vehicle readiness plan to address short-term issues for impending electric vehicle deployment as well as to begin planning for long-term issues; and to advance the Richmond Region as an attractive and sustainable market for electric vehicle technology; and $5,000 from the Virginia Department of Mines, Minerals and Energy to assist DMME with updates to the Virginia Energy Plan; find new and better sources for information; create charts and graphs; and assist with reorganization.

Dr. Reid N. Harris, Biology, received $526,505 from the National Science Foundation to investigate the links between taxonomic, genetic, and functional microbial diversity in an amphibian/skin microbe symbiosis; and $7,913 from Villanova University to analyze swab samples from amphibians to detect antifungal bacterial metabolites.

Dr. Teresa T. Harris, Early, Elementary, and Reading Education, received $400,000 from the Virginia Department of Social Services to conduct a statewide early childhood needs assessment and fiscal
Dr. Anthony S. Hartshorn, Geology and Environmental Science, with Dr. Victoria Bakker, Biology, received $21,677 from the U.S. Fish and Wildlife Service to investigate biological impact of environmental contaminants (e.g., lead, DDE, microtrash, PBDEs, rodenticides) on the survivorship and/or reproductive success of California condors; and $25,000 from Weyerhaeuser Corporation to measure soil respiration rates to provide insight into soil processes as they relate to sustainability of working forests.

Ms. Kimberlee Hartzler-Weakley, Institute for Innovation in Health and Human Services, received a total of $14,701 from private/non-profit sponsors to aid in preventing teen pregnancy; a total of $151,035 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; $69,012 from the Center for AIDS Intervention Research (CAIR), Medical College of Wisconsin to recruit statewide samples of people living with HIV (PLWH) and HIV-negative persons at high risk for the infection for data collection sessions; $9,581 from the Virginia Department of Social Services to combine the strengths of the Healthy Families of Page County program with The Reading Road Show’s Gus Bus Program to help at-risk new parents and young families; $24,871 from Rockingham Memorial Hospital to address substance abuse in culturally appropriate ways and learn environmental strategies through praxis; a total of $11,787 from private sponsors to survey city, county, and private school youth in Harrisonburg and Rockingham County; a total of $88,567 from the Virginia Department of Health to support the implementation of Project Connect in Virginia to improve health response to domestic and sexual violence; and to provide for the management and administrative support of the Virginia Department of Health medical interpreter grant program; $74,100 from Virginia Commonwealth University to promote health careers and access to primary care for medically underserved populations through community-academic partnerships; a total of $57,356 from private donors to provide weekly support in the surrounding area to encourage early learning and literacy; and $57,500 from the Harrisonburg-Rockingham County Health Department to implement the “Choosing the Best” curriculum in grades 6-8 at Thomas Harrison Middle School and Skyline Middle Schools.

Dr. John T. Haynes, with Dr. Steven J. Whitmeyer, Geology and Environmental Science, received $7,378 from the U.S. Geological Survey to support bedrock mapping in the south half of the Monterey SE 7½’ quadrangle, in the Valley and Ridge Province, Highland County, Virginia.

Ms. Cheryl L. Henderson, The Graduate School, received a total of $7,109 from the Virginia Department of Education to provide event planning and management services.

Dr. M. Hossein Heydari, with Dr. Brett C. Tjaden, Computer Science, received $34,807 from the Department of Defense to provide support for undergraduate students for the Information Security Programs at JMU.

Ms. Jane Hubbell, Institute for Innovation in Health and Human Services, received $15,000 from the Rockingham Memorial Hospital Foundation to provide onsite urgent care to homeless clients enrolled in local homeless shelters while providing case management ser-

ices when comprehensive services are needed; a total of $8,000 from Crossroads to Brain Injury Recovery, Inc. to provide services to individuals affected by brain injuries, maximizing rehabilitation and contributing to the community; $10,250 from the Harrisonburg Community Health Center to provide educational and health administrative services; $10,000 from the City of Harrisonburg to provide onsite urgent care to homeless clients enrolled in local homeless shelters; $53,000 from The Claude Moore Charitable Foundation to provide respite services to families of children with disabilities; and $100,981 from the Virginia Department of Health to improve campus based suicide prevention and intervention at Virginia institutions of higher education.

Dr. Jessica G. Irons, Psychology, received $9,601 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.

Dr. Melinda G. Ivey, Early, Elementary, and Reading Education, received $31,808 from the Virginia Department of Education to provide high-quality professional development for high school English teachers; and $8,000 from the International Reading Association to determine how and why a shift in teaching practice, in effect a shift in teacher-student power relations, affect student identities and social relationships.

Dr. Elizabeth A. Johnson, Geology and Environmental Science, received $10,000 from The Jeffress Memorial Trust to probe the structure of the crust and mantle beneath the Shenandoah Valley.

Dr. Erika N. Kancler, Biology, re-
ceived $5,000 from the Wells Fargo Foundation to offer a summer camp pilot, Careers in Health and Medicine Program (CHAMP) to address childhood obesity and racial and ethnic equity by increasing diversity of the health professional workforce through career development.

Mr. Abram T. Kaufman, Facilities Management, with Dr. Christie J. Brodick Hartman, Institute for Stewardship of the Natural World, received $23,993 from the National Fish and Wildlife Foundation to support several storm water management activities on the campus of JMU.

Dr. Gary R. Kirk, with Dr. Liliokanaio X. Peaslee and Dr. Amanda J. Cleveland, Political Science, received $438,229 from the U.S. Department of Justice to investigate the impact of enhanced training and peer advising for youth mentors on the quality of mentor-mentee relationships and mentee life outcomes.

Dr. Cynthia A. Klevickis, Integrated Science and Technology, received $35,090 from the Virginia Department of Education to conduct summer workshops and support teachers with curriculum implementation of the integrated STEM and engineering design activities into their mathematics and science classrooms that are aligned with the VA Standards of Learning (SOL).

Dr. Robert A. Kolvoord, Center for STEM Education Outreach, received $31,893 from Temple University to design and execute a classroom-based study of student spatial thinking; a total of $20,375 from various public schools to facilitate the distribution of the ArcGIS software package to Virginia teachers; and $3,500 from RMH Healthcare to provide GIS support and analysis for the RMH Strategic Prevention Framework State Incentive Grant (SPF SIG), which will focus on reducing alcohol-related motor vehicle crashes in Rockingham County among 15-24 year-olds.

Ms. Joyce H. Krech, Small Business Development Center, received a total of $18,425 from industry collaborators, $5,000 from Augusta County, $5,000 from Rockingham County, a total of $771,683 from the U.S. Small Business Administration, and $1,250 from the City of Lexington to support the programming and outreach activities of the Small Business Development Center.

Dr. Margaret M. Kyger, Exceptional Education, received $89,676 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.

Ms. Susan F. Lamb, WMRA, received a total of $233,482 from the Corporation for Public Broadcasting to provide a community service grant for public radio; $86,011 from the Virginia Public Broadcasting Board to deliver programs and services which support preschool and adult education and to inform, educate and entertain families with program contents that deliver alternatives to commercialized television; and $26,232 from the Commonwealth of Virginia, Department for the Blind and Vision Impaired to provide reading services to residents of Virginia whose vision impairment, blindness, or disability prevents them from reading independently.

Dr. Reid J. Linn, The Graduate School, received $7,000 from the National Science Foundation to conduct a state-wide survey of students in STEM programs to assess the state-specific reasons why they succeed (or not) in STEM disciplines; and a total of $1,939,324 from the Virginia Department of Education, with Ms. Melinda B. Bright and Ms. Cheryl L. Henderson to support statewide efforts and activities designed to enhance service effectiveness for personnel who serve children and youth with disabilities and to continue to assess needs and services provided to consumers; and with Mr. John T. McNaught and Ms. Cheryl L. Henderson to provide direct instruction, models, and opportunities to practice skills associated with self-determined behavior beginning at the elementary level and continuing through the student’s educational career.

Dr. Christy L. Ludlow, Communications Sciences and Disorders, received $77,257 from Emory University on an NIH project 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; a total of $210,203 from Passy-Muir Inc. to identify which stimulation parameters will induce a greater increase in swallowing rate and the greatest cortial brain response to vibrotactile stimulation in healthy volunteers; and to assist Passy Muir with bringing a product to market; $60,385 from the Alfred Mann Foundation to analyze Videofluoroscopic (VF) recordings of Modified Barium Swallow for Hyolaryngeal elevation measurements using Peak Motus software; and $1,000 from a private donor to allow a graduate student to conduct research investigating the effect of breathing on voice production.

Dr. Gina MacDonald, Chemistry & Biochemistry, received $15,537 from the National Science Foundation through University of Richmond to investigate PS binding to both the GluR2 and NR2B S152 domains.
Dr. Eric H. Maslen, Integrated Science and Technology, received a total of $3,527 from HDT Expeditionary Systems, Inc. to analyze data from HDT's summer shelter tests, write a summary report, and present the findings.

Dr. Lisa M. Maynard, School of Music, received $1,100 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, Integrated Science and Technology, received a total of $101,505 from the National Institutes of Health through the University of Virginia to optimize lacratin’s cytoprotective activity and understand its mechanism of action; and with Dr. Ronald W. Raab, Integrated Science and Technology, to continue work on the development of syndecan-1 deletion and point mutants to further elucidate the nature of the lacratin cell surface binding complex.

Dr. Jonathan D. Monroe, Biology, received $127,287 from the National Science Foundation to characterize the physiological functions of five plastid-targeted β-amylases in Arabidopsis; and $24,000 from Pearson Education to contribute to textbook authorship.

Dr. Joanna B. Mott, Biology, received $52,955 from the Gulf of Mexico Alliance to determine whether assays for genes associated with virulence in Vibrio vulnificus can be used to improve the distinction between clinical and environmental strains from the Gulf of Mexico and South Carolina.

Dr. Robert L. Nagel, with Dr. Adebayo A. Ogundipe, School of Engineering, received $15,000 from the U.S. Environmental Protection Agency to provide JMU with sustainable means of recycling food waste from the dining halls by designing an aerobic composting facility on campus.

Dr. Carole L. Nash, with Dr. James W. Wilson, and Dr. Eric H. Maslen, Integrated Science and Technology, received $4,929 from Trout Unlimited to address the adverse effects of dam removal and stream restoration on architectural and archaeological resources; a total of $27,212 from the National Park Service to conduct archeological field surveys as required and conduct condition assessments on NPS sites to determine the impacts to sites from the Smith Run Fire of February 2011; and $2,725 from the City of Harrisonburg to assess the impact of construction on historic landscape within the boundaries of Ralph Sampson Park.

Mr. Kenneth F. Newbold, Jr., Research and Public Service, received $178,052 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; $2,000 from the Verizon Foundation to support the annual Shenandoah Valley Technology Council’s awards gala Tech Nite at JMU; and with Dr. Jeffrey D. Tang, Integrated Science and Technology, $375,216 from the Virginia Department of Mines, Minerals and Energy to increase the use of alternative fuels and advanced technology vehicles as a means to reduce U.S. dependence on imported petroleum, increase fuel economy and improve emissions.

Dr. M. Ioana Niculescu, with Dr. Gabriel Niculescu, and Dr. Kevin L. Giovannetti, Physics & Astronomy, received $115,000 from the National Science Foundation to explore the transition between the perturbative and the non-perturbative regimes, quark confinement and hadronization, and measurements of fundamental quantities.

Dr. John B. Noftsinger, with Mr. Kenneth F. Newbold, Jr., Research and Public Service, received $1,162,776 from I2, Inc. to provide a Visual Investigative Analysis Software License; and with Mr. Kenneth F. Newbold, Jr., $49,188 from the Shenandoah Valley Technology Council 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.

Dr. Maria C. Papadakis, Geographic Science Program, received $46,695 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, School of Engineering, with Dr. Morgan C. Benton, Integrated Science and Technology, Dr. Robert L. Nagel, School of Engineering, Dr. Chapman H. Frazier, College of Education, and Dr. Christopher S. Hulleman, Center for Assessment & Research Studies, received $431,202 from the National Science Foundation to study and assess ways in which sustainability instruction in five contexts can be integrated into existing materials in engineering, science, social science, education, and the humanities.

Dr. Olga Pierrakos, School of Engineering, received a total of $113,975 from the National Science Foundation to understand what students learn during undergraduate research and industry experiences and how they use and transfer complex problem solving skills in new settings; and to continue data collection and analysis, as well as furthering the development of valid and reliable instruments to measure the engineer identity of students.

Dr. Robert J. Prins, School of Engineering, received a total of $8,200 from Outlier Electric Vehicles, Inc. to address the design and partial construction of an electric motorcycle.

Dr. Eric J. Pyle, Geology and Environmental Science, received $13,629 from the U.S. Department of Education to coordinate STEM coursework offered and to develop, deploy, and communicate results of STEM secondary content course and elementary institute science concept needs assessments among the teachers participating in the project; and with Dr. Anna M. Courtier, Geology and Environmental Science, and Dr. Anthony L. Tongen, Mathematics and Statistics, received $149,577 from the National Science Foundation to transform mathematics and Earth science instruction in middle and high schools by developing an integrated mathematics and Earth systems science approach to instruction.

Dr. Brianna Quinn, Exceptional Education, received $29,000 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 a total of $627,650 from a variety of donors and sponsors to provide interpretation services to non-English speaking clients; a total of $249,706 from Valley Aids Network (VAN) to provide educational and health administrative services; $17,340 from individual donors to offer training programs and language proficiency examinations to prospective interpreters; and a total of $1,790,836 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; to develop web training for “Shaken Baby Syndrome,” 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 create a plan first web-based training for early childhood home visitors on the VA Home Consortium site; to maintain the Home Visiting Consortium website, to continue to operate its web-based training registration system, and to continue to provide periodic reports on the home visiting registration; and with Ms. Jane Hubbell, Institute for Innovation in Health and Human Services to assure the provision of comprehensive, essential health and support services for individuals and families with HIV infection.

Dr. Mark C. Rankin, English, received $179,392 from the National Endowment for the Humanities to investigate the physical construction of books and the nature of reading during the era of the Tudor monarchs (1485-1603) through an overseas workshop program.

Dr. Vicki A. Reed, Communication Sciences and Disorders, received $45,500 from the Scottish Rite Foundation of Virginia to continue support of the JMU-Scottish Rite Language Disorders Clinic.

Dr. Robert D. Reid, Institute of Certified Professional Managers, received $250,000 from the Institute of Certified Professional Managers to maintain the organization’s national headquarters on the campus of JMU.

Dr. Kenneth R. Rutherford, Center for International Stabilization & Recovery, received $100,000 from an industry collaborator to serve as the depository and active agent for continuing peer support intellectual capability, trainings and program implementation in Burundi, Uganda, and Rwanda; $100,000 from a private donor to provide trainings in post-conflict countries including Africa, the Middle East and Latin America; and a total of $33,418 from the Geneva International Centre for Humanitarian Demining to conduct a detailed analysis of the
Explosive Remnants of War (ERW) and mine victim information systems of four countries to provide services to inform the ERW/mine action operations and survivor assistance programs; and to improve the maintainability and availability of the Information Management System for Mine Action (IMMSA) documentation by hosting it in a Wiki format online; $20,000 from a private donor to conduct a three-day peer support training with persons with disabilities in Dong Hoa, Vietnam; $24,985 from the Military Assistance Advisory Group to enhance the management skills and knowledge of senior managers of Explosive Remnants of War and mine action programs in Ecuador and Peru; a total of $884,732 from the U.S. Department of State to provide staffing support for PM/WRA through the Frasure-Kruzel-Drew Humanitarian Mine Action Fellowship and to maintain and enhance the existing Mine Action Information Center (MAIC) website and to maintain and annually update the Online Global Mine Action Registry (GMAR); and to foster management skills at the senior level of global mine-action activities by providing senior-level managers with the tools necessary to make effective policy and practice decisions; a total of $131,069 from the National Committee for Demining and Rehabilitation (NCDR) to provide instructional materials for the Explosive Remnants of War Training Course and carry out work in support of the implementation of the ERW Training Course to be conducted by the NCDR in Amman, Jordan; with Dr. Helmut Kraenzle, Center for Geographic Information Science, received $10,190 from the Geneva International Centre for Humanitarian Demining to produce a basic Geographic Information Systems (GIS) handbook that will allow mine action practitioners in the field to learn theory and how to practically apply GIS techniques; $499,985 from the U.S. Agency for International Development to strengthen the quality of finance and business education in Iraq through the implementation of a Finance Education Training and Exchange Program; and $12,666 from the Action on Armed Violence (AOAV) to provide psychosocial support services to victims of armed violence in Burundi.

Dr. Brenda M. Ryals, Communication Sciences and Disorders, received $25,000 from the American Auditory Society to support the Editor-in-Chief of the Ear and Hearing Journal.

Dr. Bryan K. Saville, Psychology, received $4,000 from the Society for the Teaching of Psychology to examine interteaching’s effect on long-term learning.

Dr. Giovanna Scarel, Physics & Astronomy, received $20,000 from The Jeffress Memorial Trust to broaden the understanding of the interaction between polarized electromagnetic infrared radiation and thin films of dielectric materials.

Dr. Kyle N. Seifert, Biology, with Dr. Robert L. McKown, Integrated Science and Technology, received $58,525 from the U.S. Army Medical Research and Materiel Command (USAMRMC) to study levels of the novel glycoprotein lacritin in human tears after laser refractive surgery.

Sgt. William L. Simmons, Department of Public Safety/Police, received $500 from Wal-Mart to provide safety equipment for JMU’s Police Department; and $1,300 from the Target Corporation to protect and outfit officers with bulletproof vests.

Dr. Sharon J. Simmons, Computer Science, received $26,250 from Ball State University to implement a more reliable instrumentation and trace collection system for the MINInst technique.

Dr. Kristen E. St. John, Geology and Environmental Science, received $10,700 from the National Association of Geoscience Teachers to be appointed as Editor-in-Chief for three volumes of the Journal of Geoscience Education; and $1,000 from the National Science Foundation through the Consortium for Ocean Leadership to integrate investigations of ocean core data of paleoclimates into course curricula of minority-serving institutions (MSIs).

Dr. Lee G. Sternberger, with Dr. Jennifer E. Coffman, International Programs, Dr. Giuliana Fazzion and Dr. Brillian Muhonja, Foreign Languages, Literatures and Cultures, and LTC Robert E. Pettit, III, Military Science, received a total of $372,822 from the Institute of International Education, Inc. to increase linguistic and cultural understanding among ROTC students and to build the Swahili language program at JMU; and with Dr. Margaret B. Sheader, College of Education, a total of $178,581 from the International Research & Exchanges Board (IREX) to carry out a semester-long program to showcase the best of U.S. educational concepts, technology, civic life and culture for foreign secondary-level teachers in a range of disciplines.

Mr. Jonathan P. Stewart, with Mr. Shane T. O’Hara, School of Theater and Dance, received $5,000 from the New England Foundation for the Arts to present the Eisenhower Dance Ensemble at the 2012 New Dance Festival.

Dr. Stephanie B. Stockwell, Integrated Science and Technology, received $10,000 from The Jeffress Memorial Trust to complete and publish the FegA NTD structure/function analysis and sequence and annotate the wild type B. janicum strain 61A152 genome.
Dr. Trevor F. Stokes, The Alvin V. Baird Attention and Learning Disabilities Center, received $35,500 from the Shenandoah Valley Regional Program to provide a student internship for educational experience through involvement in professional activities in the area of applied behavior analysis within the school districts associated with the Shenandoah Valley Regional Program.

Dr. Michael L. Stoloff, Psychology, with Dr. Joann H. Grayson, Psychology, received a total of $89,500 from the Virginia Department of Social Services to publish and distribute the Virginia Child Protection Newsletter throughout Virginia.

LTC. Nick D. Swayne, College of Education, received $40,000 from the Rockwell Collins Charitable Corporation to help promote growth of the FIRST LEGO League in Washington, D.C., and in rural areas and school divisions; with Dr. Cynthia A. Klevickis, Integrated Science and Technology, Dr. James S. Sochacki, Mathematics and Statistics, Dr. Kevin L. Giovanetti and Dr. Gabriel Niculescu, Physics & Astronomy, $199,991 from the State Council of Higher Education for Virginia (SCHEV) to improve teacher quality in science, technology, and math content knowledge and pedagogical skills with innovative, sustainable, engaging, research-based teaching methods, and to address the needs of middle and high school teachers and principals; $42,146 from Virginia City & County Donors, $6,084 from First LEGO League, and $2,500 from the Grocery Manufacturers Association to provide sponsorship of robotics teams; and $970 from an industry collaborator to conduct Mid-Valley Consortium for Teacher Education activities.

Dr. Louise M. Temple, Integrated Science and Technology, received $7,667 from the National Institutes of Health through Rutgers University to evaluate a theory-based intervention delivered to mentors and their undergraduate protégés, to increase protégé perceived ability to perform various tasks and activities in the research domain; and $5,000 from the American Society for Microbiology to conduct a course at Deenbandhu Chhau Ram University of Science and Technology, Sonipat, Haryana, India.

Dr. Anthony L. Tongen, Mathematics and Statistics, received $27,500 from The Mathematical Association of America to continue the M^3 summer program to foster mathematical development and personal mentorship.

Dr. Megan E. Tracy, Sociology and Anthropology, received $147,345 from the National Science Foundation to examine the responses of China’s dairy corporation and industry representatives to the September 2008 melamine contamination scandal that demonstrates commitment to global demands for food safety and security.

Dr. Brian C. Utter, Physics & Astronomy, received $50,427 from the National Science Foundation to understand the influence of surface chemistry on the jamming and flowing of submerged granular flows.

Dr. C. Steven Whisnant, Physics & Astronomy, received $45,000 from the National Science Foundation to investigate the properties of the nucleon and nucleon resonances through Compton scattering and the production of mesons as well as the study of photonuclear reactions at low energy.

Dr. Steven J. Whitmeyer, Geology and Environmental Science, received $1,625 from Pye Investigations to prepare regional relief maps and imagery for portions of Virginia and West Virginia; $36,231 from the Incorporated Research Institutions for Seismology (IRIS) to provide technical assistance for the implementation and development of the Transportable Array by completing siting reconnaissance and permit inquiries; and $8,818 from the U.S. Geological Survey to support geologic mapping and stratigraphic analyses of the eastern half of the Rileyville 7.5’ Quadrangle, VA.

Dr. Jacqueline A. Williams, Kinesiology, received $47,000 from the Virginia Department of Education to provide funding for a high-quality health and physical education content/teaching summer institute.

Ms. Kalela A. Williams, Furious Flower Poetry Center, received $3,500 from the Virginia Commission for the Arts to support a gathering of college students from across Virginia and around the country who, in workshops and panel discussions, will study the craft of poetry and learn ways to incorporate poetry in community service and outreach.

Dr. James W. Wilson, Geographic Science Program, received $23,024 from the National Science Foundation through the University of Wisconsin-Madison to develop and deliver educational materials related to the portal, tools, and ontological repository for use in undergraduate university courses.

Dr. William C. Wood, Center for Economic Education, received $87,127 from Shenandoah Valley Economic Education, Inc. to provide school systems of Harrisonburg and Rockingham County with economic teacher consultation, training, and assistance with materials.

Dr. Nathan T. Wright, Chemistry & Biochemistry, received $25,000 from The Jeffress Memorial Trust to use high-resolution structural techniques to explore the molecular and biophysical basis of the obscurin-
titin interactions.

**Dr. Roshna E. Wunderlich**, Biology, received $25,000 from The Jeffress Memorial Trust to examine, post-cranial growth, leaping dynamics and locomotor behavior through the life cycle of sifakas (*Propithecus verreauxi*).

**Dr. Yanjie Zhang**, Chemistry & Biochemistry, received $10,000 from The Jeffress Memorial Trust to design appropriate model systems for biomineralization that will help disentangle the complicated interactions at the protein-biomineral interface; and $50,000 from The Petroleum Research Fund of the American Chemical Society to measure, investigate, and explore the interfacial properties at the hydrophobic/aqueous interfaces.

CONGRATULATIONS to all of the successful applicants during the fiscal year. These awards are truly reflective of the depth of scholarly activity at the university and our tremendously talented and dedicated faculty and staff!
RESEARCH COMPLIANCE

OSP is James Madison University’s central office for review of all proposals to external funding agencies for compliance with university and agency procedures, regulations and policies. OSP ensures that all institutional proposals comply with federal, state and sponsor requirements concerning the funding and management of sponsored programs. In recent years, the complexity of regulatory oversight has dramatically increased especially regarding research involving animals and human subjects. OSP plays a crucial role in the coordination and documentation of all Institutional Research Board (IRB) and Institutional Animal Care and Use (IACUC) activity and reporting at the university.

INSTITUTIONAL REVIEW BOARD

The Institutional Research Board (IRB) is responsible for ensuring compliance with all federal and state regulations regarding research with human subjects. As a continuation of regulatory compliance service to the faculty and student research community, OSP administered the review, editing, distribution, and approval process of 668 Human Research protocols during the 2011-2012 academic year and the training of 1,483 individuals.

INSTITUTIONAL ANIMAL CARE & USE COMMITTEE

Similarly, OSP coordinates all institutional animal care and use (IACUC) activity and laboratory inspections at the university to ensure federal animal care and use regulations are observed in animal laboratories. Training in ethical animal care and use was provided for 159 investigators and 25 protocols were reviewed.

RESPONSIBLE CONDUCT OF RESEARCH

The OSP also provides training for the Responsible Conduct of Research (RCR) to comply with mandated federal sponsor guidelines that promote integrity in the proposing, planning, conducting, reporting, and reviewing of research. The chart at right indicates RCR training of 277 individuals in the responsible conduct of research during the 2011-2012 academic year. The office offers an array of online educational training, which satisfies federal, state and institutional regulations governing research ethics and the responsible conduct of research.

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