

the  
**NEURON**

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## On the Cover

# VISUALIZATION LAB A KEY COMPONENT OF MARSHALL'S GROWING CYBERINFRASTRUCTURE

*This is the third in an ongoing series of features on scientists and science educators from institutions across West Virginia.*



### Dr. Tony Szwilski

- CEGAS Director
- Professor of Engineering
- Registered professional engineer
- At Marshall since 1994
- Doctorate in Geomechanics from the University of Nottingham in the United Kingdom

Dr. Tony Szwilski, Director of the Center for Environmental, Geotechnical and Applied Sciences (CEGAS) at Marshall University, says the center's visualization lab is a critical component of the school's rapidly-growing cyberinfrastructure – and a vehicle for regional economic development.

"In the Internet-based virtual platform being developed, we're looking at training and a resource for learning and collaborations, such as conferencing and meetings," Szwilski said. "The bottom line in this economic development project is to help businesses, create new businesses and in the end, create new jobs."

With a large screen (9ft x 17ft Powerwall) worth \$470,000, two high-end projectors and a full supply of 3-D glasses, the state-of-the-art lab – known as VISE (Virtual Interactive Simulation Environment) – produces stereo sound and very high-definition images four times the resolution of HD televisions.

The lab has many applications in industry, health care, education and government. Szwilski, who has extensive experience with the mining industry, recently demonstrated the lab's ongoing development of next-generation mine safety technology before a group that included U.S. Senator Jay Rockefeller.

"The visualization lab here at Marshall University, beyond the amazing virtual, 3-D world it brings into view, is a real asset for our coal miners," Rockefeller said. "And it's also an economic generator that underscores the importance of federal programs like the National Science Foundation's Experimental Program to Stimulate Competitive Research."

In September 2009, NSF-EPSCoR awarded West Virginia a \$2.6 million grant through the American Recovery and Reinvestment Act to build capacity and promote advanced supercomputing at Marshall, West Virginia University and West Virginia State University in collaboration with five institutions in Arkansas.

This project, the Cyberinfrastructure for Transformational Scientific Discovery in West Virginia and Arkansas (CI-TRAIN), for which Szwilski is co-principal investigator, provided more than \$1 million for Marshall to upgrade computing networks and enhance immersive visualization capabilities. Key hardware, connectivity and software totaling around \$534,000 were added to the visualization lab.

Szwilski said the lab's capabilities are constantly progressing. For instance, they are working to enhance the safety training technology by using the lab's markerless motion capture system to create more realistic 3-D avatar movement to support training exercises in simulated emergency underground coal mine situations.

Other research visualizations, including complex chemical molecules, appropriately termed, "chemistry-in-your-face," and biomedical-clinical procedures mapping, also are emerging from the VISE lab.

For more information on the lab, visit [www.marshall.edu/cegas/vise](http://www.marshall.edu/cegas/vise).

*Photos courtesy Steve Shaluta, West Virginia Department of Commerce*

## about the Division of Science and Research

The Division of Science and Research provides strategic leadership for infrastructure advancement and development of competitive research opportunities in science, technology, engineering and mathematics disciplines. The office directs the National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR) in West Virginia, coordinates scientific research grants to academic institutions from federal and state agencies, and conducts outreach activities to broaden the public's understanding of science and technology.

*Vision 2015: The West Virginia Science and Technology Strategic Plan* is available online at <http://www.wvresearch.org>.

## STATE FUNDS MINI-GRANTS FOR RESEARCH GRANT PROPOSAL PREPARATION

The Division of Science and Research, West Virginia Higher Education Policy Commission, recently announced the following recipients of \$5,000 awards under the Mini-Grants program, which funds summer stipends for faculty members to prepare research grant proposals:

- Dr. Vagner A. Benedito West Virginia University
- Dr. Derrick R.J. Kolling Marshall University
- Dr. Daryl Reynolds West Virginia University
- Dr. Kaushlendra Singh West Virginia University
- Dr. Suzanne G. Strait Marshall University
- Dr. Xiaoping Sun University of Charleston
- Dr. Wendy C. Trzyna Marshall University
- Dr. Ufuk Tureli West Virginia University Institute of Technology

"Scientific research is propelling our state forward in innovation and competitiveness, and it's truly one of the most effective ways for West Virginia's economy to grow and diversify," said Governor Joe Manchin. "I congratulate the recipients for submitting winning proposals in this highly competitive year."

Faculty members are expected to prepare research proposals as part of their routine activities. At times, however, uninterrupted work would assist in developing stronger, more competitive proposals in a timelier manner. Toward that end, West Virginia's Mini-Grants program is designed to aid faculty members at institutions of higher education in the state in the preparation of research or research equipment proposals for submission to external agencies or foundations.

This year saw the largest number of proposals in the program's history with 22 submissions. The competitive awards are funded through the state's Research Challenge Fund.

## MOUNTING RESEARCH ACHIEVEMENTS AT WEST VIRGINIA WESLEYAN COLLEGE

*Bob Skinner, Director of Marketing and Communication*

Scientific research is growing at West Virginia Wesleyan College. With faculty members who continue to submit winning grant proposals and the April opening of the David E. Reemsnyder Research Center, Wesleyan has become a leader in student-faculty research among primarily undergraduate institutions statewide.

Trained at Wesleyan as the next generation of successful science, technology, engineering and mathematics professionals, graduates have long been successful in gaining entrance to graduate and professional schools.

And while college officials are deservedly proud of past successes, President Pamela Balch, the Board of Trustees and faculty determined Wesleyan needed to add a research center to educate more students for science-related careers.

The \$8.9 million research center adds 23,000 square feet of teaching, research and lab space to the existing Christopher Hall of Science. Faculty members had significant input into the design of and equipment in the new building, led by Dr. Jeanne Sullivan, associate professor of biology.

"The best way to learn science is to do science instead of just reading about it," Sullivan said. "And you need laboratory space to do science. We have that here."



Sullivan received a \$20,000 Instrumentation Award this year, while Dr. Tim Troyer, assistant professor of chemistry, received a \$40,000 Innovation Award. Both of these grant programs, made possible by West Virginia's Research Challenge Fund, support advanced laboratory equipment and have funded much of the lab equipment in Wesleyan's new research center.

"Relative to other schools in the region, I doubt you will find another small college with so much space dedicated to undergraduate science teaching and research," Troyer said.

Dr. Luke Huggins, associate professor of biology, recently was awarded two \$50,000 awards – one in partnership with Troyer – from the West Virginia IDeA Network of Biomedical Research Excellence (WV-INBRE).

"The seed grants have allowed faculty in biology and chemistry to develop synergistic collaborations within the Wesleyan community as well as with outside researchers," said Huggins.

For more information on Wesleyan's science departments, visit [www.wvwc.edu](http://www.wvwc.edu).



### WESLEYAN'S LEADERSHIP

Dr. Pamela Balch has been the president of West Virginia Wesleyan College since 2006. With 30 years of experience in higher education, she is known not only as an esteemed administrator at Wesleyan – but also as a strong advocate for science education and academic success.

*"In addition to being an outstanding administrator for West Virginia Wesleyan College, President Balch is recognized as the academic leader on our campus. Her passion for student learning is acknowledged by faculty and staff and has inspired all to reach even higher levels of teaching and research."*

Lloyd Jackson, Board of Trustees



## WVU STUDENTS AND MARSHALL GRADUATE RECEIVE NSF GRADUATE RESEARCH FELLOWSHIPS

Left to right: Emily Calandrelli, David Dittenber, Jennifer Knipe, Nick Morris, Greg Gay and Allison Willingham

Six students from West Virginia University – all in the College of Engineering and Mineral Resources – have received prestigious fellowships from the National Science Foundation to pursue research in graduate school.

Emily Calandrelli of Morgantown; David Dittenber of Columbus, Ohio; Greg Gay of Morgantown; Jennifer Knipe of Martinsburg; Nick Morris of Morgantown; and Allison Willingham of Keyser each will receive \$30,000 per year for a maximum of three years of graduate study and research, plus a travel stipend for study abroad.

Marisa Rubio, a 2008 graduate of Marshall University and doctoral student in the Molecular Biophysics and Biochemistry Graduate Program at Yale University, also was chosen for this fellowship – the most prestigious award granted to graduate students studying in the United States.

The NSF's Graduate Research Fellowship Program is aimed at helping ensure the vitality of science and engineering in the United States, as well as reinforcing its diversity. This year, the NSF increased the number of Graduate Research Fellowships it awarded nationally to 2,000, credited in part to funding from the American Recovery and Reinvestment Act.



## WVU PHYSICS PROFESSORS RECEIVE NSF CAREER GRANTS TOTALING \$941,000

Paul Cassak and Feruz Ganikhanov, assistant professors in the Department of Physics at West Virginia University, each have received National Science Foundation CAREER Awards worth a combined value of more than \$941,000.

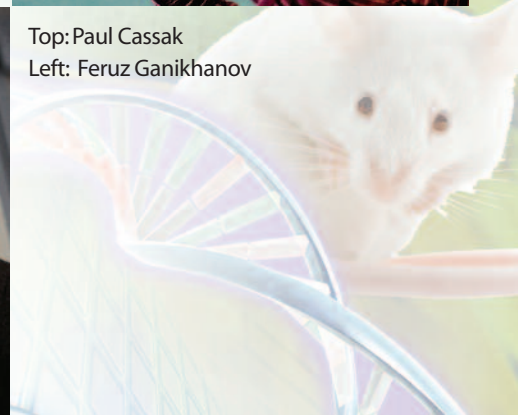
The Faculty Early Career Development (CAREER) Program offers the NSF's most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, education and the integration of education and research.

For details on their research, visit [research.wvu.edu](http://research.wvu.edu).

*Photos courtesy West Virginia University*



Top: Paul Cassak  
Left: Feruz Ganikhanov



# expanding your horizons

## MARSHALL UNIVERSITY HOSTS CONFERENCE FOR MIDDLE SCHOOL GIRLS

On April 10, Marshall University hosted the Expanding Your Horizons (EYH) Conference, which welcomed approximately 40 girls from middle schools across the state to the Robert C. Byrd Biotechnology Science Center. The event was sponsored by the West Virginia Chapter of the Association for Women in Science and supported by a grant from the West Virginia Division of Science and Research.

Participating students had the opportunity to discover the excitement of science, technology, engineering and mathematics (STEM) by participating in hands-on workshops led by female scientists and science students. Workshop selections covered a wide number of topics in biology, physics, math and psychology.

Parents and teachers of participants were invited to attend two adult information sessions – one focused on preparing for, applying to and financing college; and another that provided information about student opportunities, including science camps, competitions, activity days and NASA internships.

The EYH Network, a non-profit organization dedicated to inspiring young women to pursue STEM careers, recently was named recipient of the prestigious 2010 National Science Board Public Service Award as an organization that has made significant contributions and impact in public understanding of STEM.

For more information, visit [www.expandingyourhorizons.org](http://www.expandingyourhorizons.org).



## KIDS HAVE FUN WITH SCIENCE AT POCA HIGH SCHOOL'S "LAB DAY"



Homemade lava lamps, exploding soda bottles, fake snow, fossils and Madagascar hissing cockroaches were on display on May 5 at Poca High School, where local elementary school students were led by high school students through fun, scientific demos and experiments.

Poca High School's event was held in conjunction with the bold National Lab Day initiative, which seeks to improve labs and discovery-based science experiences for students in grades K-12.

This nationwide project was celebrated with similar events across the country during the first week of May.

The Clay Center in Charleston also joined the celebration with a day of hands-on activities that included exploring space, engineering and the environment.

Poca High School's Lab Day was organized by members of the school's Science National Honor Society and featured science demos from representatives of West Virginia State University.

For more information on National Lab Day, visit [www.nationallabday.org](http://www.nationallabday.org).





## PHARMACEUTICAL RESEARCH AT THE UNIVERSITY OF CHARLESTON SCHOOL OF PHARMACY

*Lee Altiery, Executive Assistant to the Dean*

Through a collaboration between the Charleston Area Medical Center (CAMC) and the University of Charleston School of Pharmacy, and with funding from West Virginia IDeA Network of Biomedical Research Excellence (WV-INBRE), two research projects are underway – including one focused on the drug D-Cycloserine.

Gagan Kaushal, Ph.D., assistant professor, along with Cristian Sirbu, Ph.D., clinical research fellow at CAMC, co-authored a proposal to study D-Cycloserine, a drug previously used to treat tuberculosis, to determine if it can help people with acrophobia. They are proposing that D-Cycloserine, already used in clinical trials to treat certain phobias, used in small doses might help calm the fears of a patient afraid of heights.

At the CAMC Department of Behavioral Medicine, with the approval of the Institutional Research Board, data is being collected with the assistance of 70 volunteer patients for this one-session therapy study.

Dr. Kaushal, who also is studying the shelf-life duration of routinely compounded parenterals, recently was named 2010 University Fellow by the University of Charleston.

## NTTC'S TECHNOLOGY PORTFOLIOS IDENTIFY PARTNERSHIP OPPORTUNITIES

*Kathryn Duda, National Technology Transfer Center*

The Robert C. Byrd National Technology Transfer Center (NTTC), located on the campus of Wheeling Jesuit University, recently developed a new screening tool to enable NASA managers to efficiently search out companies and available technologies that meet the agency's needs.

The "Technology Portfolio" contains current relevant information on select companies and innovations from the Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) programs at NASA or other federal agencies.

The goals are to increase research and development efficiency and supplement the development of other technologies, thus speeding the process of infusing new technologies into NASA programs. The portfolios provide companies with new technology opportunities from the thousands of small tech-based research companies in the country.

The NTTC has created technology portfolios on a number of topics, including small spacecraft, inflatable structures, wireless communications, renewable energy and sustainability.

The portfolios are packaged on CDs and made available on the NTTC Website at [www.sbipp.com](http://www.sbipp.com).

## IN-FLIGHT DIAGNOSIS AND TREATMENT



# VISION "A diversified multi-tenant research, development and technologies for the advancement of education and



## New opportunities for academic research, product innovation and economic development

Through the leadership of Governor Joe Manchin, U.S. Senator Jay Rockefeller and other federal, state and local representatives, the State of West Virginia recently accepted a donation of property and facilities from Union Carbide Corporation, a subsidiary of The Dow Chemical Company, at its technology park in South Charleston, W.Va.

Under the state Higher Education Policy Commission (HEPC), which voted in March to approve the donation, the West Virginia Education, Research and Technology Park is in the process of becoming the newest research campus in West Virginia's higher education system.

With space available and infrastructure in use by existing tenants, including higher education and high-tech businesses, the park is an ideal location for technology-based businesses and adds significant capacity to West Virginia's academic and economic development missions.

Core research and development areas for the park include energy, chemicals and materials, and biotechnology. With a focus on developing new technologies and diversifying the state's economy, plans for the park are aimed at translating investments in higher education and research into business and economic growth.

In November 2009, the HEPC was awarded a planning grant from the Economic Development Administration (EDA) in the amount of \$250,000, with matching funds from the state, to support the development of a transition and operations plan for the park's redevelopment.

Additional funding options are being pursued, including a second proposal to the EDA that is being developed for modernization and/or construction.

## THE WEST VIRGINIA

**"This is a place where we can turn our investments into high-tech jobs and diverse economic opportunities, which is critical to securing a strong and vibrant future for West Virginia."**

Governor Joe Manchin



Building 770 – laboratories and offices



and commercialization park focused on energy, chemicals and related economic development in West Virginia and the surrounding region.

# EDUCATION, RESEARCH AND TECHNOLOGY PARK



Building 740—laboratories and offices

**“I look forward to seeing an active tech park that puts people to work and energizes our economy.”**

Senator Jay Rockefeller

**“This represents a tremendous opportunity for higher education, for research and development, and for the future of West Virginia.”**

David Hendrickson, HEPC Chairman

**“I am eager to pursue the promise that I know the park holds for education and the economy.”**

Brian Noland, HEPC Chancellor



Building 2000—offices

## WVU PLANS FOR \$14.5 MILLION BIOMEDICAL RESEARCH FACILITY

West Virginia University is set to construct a new biomedical research facility on its Morgantown campus thanks to \$14.5 million in funding from the National Institutes of Health – the largest grant to date at WVU under the American Recovery and Reinvestment Act (ARRA) of 2009.

The funds, awarded competitively, will be used to construct a 22,000-square-foot building, adjacent to the Robert C. Byrd Health Sciences Center, to meet the infrastructure needs of current and future biomedical researchers who use laboratory animal models to study human diseases and their treatments.

“This grant will help us meet a long-felt need at the Health Sciences Center – the construction of a fully state-of-the-art facility to house and care for research animals,” said Christopher C. Colenda, MD, MPH, WVU's chancellor for health sciences. “The funding of this project by the National Institutes of Health is recognition of the quality of the research conducted by our faculty, and their confidence in our ability to continue and expand this work.”

The new facility is expected to result in 253 additional permanent jobs on the WVU campus, including 13 directly in the animal quarters and 240 in biomedical research laboratories around the Health Sciences Center. During construction, the project will add 113 jobs to the local community.

Higher education and research initiatives have received 80 awards under the ARRA, totaling more than \$43 million.



Total Awards  
\$43,318,116.40

## CLEMENTS UNDERSCORES HIGHER EDUCATION AS REGIONAL ECONOMIC DRIVER AT NATIONAL ACADEMY OF SCIENCES SYMPOSIUM



Higher education needs to strengthen its role as an economic driver and innovation leader, West Virginia University President Jim Clements said at a recent symposium sponsored by the U.S. National Academy of Sciences.

Clements appeared on a panel titled “Clustering for 21st Century Prosperity” to discuss how research and innovation are key to finding solutions to many of today's issues, including energy, the economy, health care, education, the environment, technology and more.

He noted that universities are models for innovation clusters that can drive the economy, giving three examples:

- A technology transfer model that leads to companies around new discoveries, citing Protea Biosciences, a company that started from WVU faculty research, grew in WVU's incubator and is now a global business;
- Location-specific research that spawns clusters and partnerships around regional strengths, noting West Virginia's natural resources – coal, timber and gas – that have positioned WVU for focused research in energy; and,
- Targeted niche innovations that develop clusters, citing WVU's biometrics initiative, underpinned by the Center for Identification Technology Research, or CITeR, led by Dr. Larry Hornak and Dr. Bojan Cukic of the Lane Department of Computer Science and Electrical Engineering at WVU.

“In any of these three models, as well as others for creating new clusters, universities have important roles to play,” Clements said.

# SPOTLIGHT

## DEPARTMENT OF INTEGRATED SCIENCE AND TECHNOLOGY AT MARSHALL UNIVERSITY

Marshall University's Department of Integrated Science and Technology (IST), which offers degrees in biotechnology, computer and information technology, environmental assessment and policy, and environmental science, recently has received a flurry of attention – and with good reason.

John Sammons, assistant professor in the IST Department, worked to develop a relationship with SiQuest Corporation of Canada – which announced that Marshall officially has become the company's newest and preferred academic training partner in the delivery of advanced Internet browser forensics training in the Eastern United States.

SiQuest's CacheBack® is fast becoming the tool of choice to support investigations involving or revealing child exploitation offences, terrorism, criminal premeditation, crimes against persons, corporate fraud and theft. Government and law enforcement agencies turn to CacheBack to quickly rebuild cached Web pages, locate and identify photographic evidence, and comb through complex Internet histories.

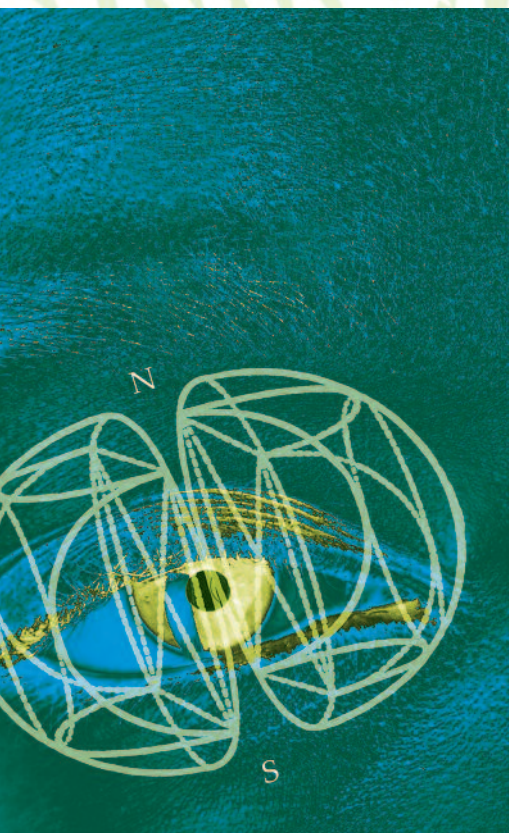
SiQuest has developed its Academic Training Program to help educational institutions bring this same type of specialized Internet forensics training to the classroom. Through this partnership, students and faculty will be provided with CacheBack training and software at no cost. In exchange, Marshall will serve as SiQuest's preferred training facility in the Eastern United States and open the doors for training to government, law enforcement and corporate users of CacheBack software.

Sammons said that in the end, graduates of Marshall's program will be working to help solve cases and that this experience will serve them well and help the university meet one of its goals – to be a training hub for the national, and even international, digital forensics community.

"Internet forensics plays a huge role in many, many cases and our students will leave Marshall University's program with a solid command of the skills and knowledge necessary to use this tool effectively, making them employable and sought after upon graduation," he said.

Sammons also worked to develop a relationship with AccessData, a pioneer in digital investigations that empowers law enforcement, government agencies and corporations to perform computer investigations of any kind.

Marshall's Forensic Science Center, in conjunction with the IST Department, recently announced two agreements with AccessData that will give students the opportunity to conduct research for the company, the results of which will be incorporated into AccessData training and materials that will be delivered to a worldwide audience.



## NEWS AND ANNOUNCEMENTS

### STaR SYMPOSIUM 2010

The Division of Science and Research has announced that West Virginia's science, technology and research community will gather at the STaR Symposium on the campus of Marshall University in Huntington on September 27-28, 2010 to share research developments, ideas and collaborations. The theme of this year's conference is, "Sustainability: How Science, Technology and Research Can Sustain Our Future." For more information, including the call for research papers, student poster competition details and sponsorship opportunities, visit [www.wvresearch.org/starsymposium](http://www.wvresearch.org/starsymposium).



### WVNANO SPRING COLLOQUIA SERIES

WVNano, the State of West Virginia's focal point for nanoscale science, engineering and education research, workforce development and economic development, held a spring colloquia series from February through the end of April that brought leading researchers, faculty and educators – all experts in the field of nanoscience, nanotechnology and education – to West Virginia University's campus in Morgantown. For more information, visit [wvnano.wvu.edu](http://wvnano.wvu.edu).

### WV STATE UNIVERSITY ASSISTING HAITIAN STUDENTS

West Virginia State University is working to bring two Haitian students – a senior biology major and a sophomore communications major – to its campus to complete their education following the devastating earthquake that demolished their universities. The Division of Science and Research has committed to support the WVSU Haitian Assistantship Fund.



*Nahomie Ingrid Saintil is in her fourth year at the Faculté de Médecine et de Pharmacie, which was affected by the January 12, 2010 earthquake.*

### RESEARCH TRUST FUND DONATIONS AT WVU

West Virginia University recently received two notable donations to be matched by state dollars under the Research Trust Fund. The Maier Foundation pledged \$1 million to create the William J. Maier Jr. Chair of Research at the Charleston division of WVU's School of Medicine; and George Bennett, a WVU graduate who founded four successful businesses, contributed \$1 million to support research in energy, nanotechnology, biomedical sciences and biometrics in the school's College of Engineering and Mineral Resources.



### WVU RESEARCH ADMINISTRATOR TESTIFIES BEFORE CONGRESS

Dr. Mridul Gautam, associate vice president for research and economic development and the Robert C. Byrd Professor of mechanical and aerospace engineering at WVU, testified in April before the House Appropriations Subcommittee on Commerce, Justice and Science about the importance of EPSCoR to the university and the entire state. "West Virginia is one of the five original EPSCoR states, and has benefited greatly from its participation in this important program," Gautam said.

## MARSHALL ALUMNA DONATES \$50,000 FOR AQUATIC RESEARCH

Shelba Pew, Marshall University alumna, recently donated \$50,000 to Marshall's College of Science to be used in support of aquatic research. Pew made the donation in honor of her late father, William Cunningham Pew. According to Dr. Charles Somerville, Dean of the College of Science, Pew's donation will support the study of algal population dynamics in large rivers – an important first step in realizing the potential benefits of algae. Pew has generously donated to Marshall University through various gifts to the College of Science and College of Education and Human Services.

## WVU INKS RESEARCH AGREEMENT WITH EUROPEAN RESEARCH INSTITUTION

West Virginia University recently signed a research agreement with one of Europe's most respected research universities that is expected to greatly expand opportunities for collaborations among faculty, students and scientists in the U.S. and Italy. The memorandum of understanding, signed by representatives of WVU and the University of Rome Tor Vergata, is focused on direct scientific collaboration in the areas of physical sciences, engineering, mathematics, biomedical sciences, social sciences, humanities and creative arts and design.



## MARSHALL UNVEILS IPHONE APPLICATION

Marshall University has released an Apple iPhone application that is designed to promote the university's major Web-enabled resources to an increasing population of current and potential students using mobile Internet devices. The MUMobile application can be used to search the campus phone directory, locate buildings on campus, view available courses, keep up with the latest sports scores and get access to events happening on campus. The university's Information Technology Division used Blackboard Inc.'s MobileEDU platform and services to develop the application.

## MARSHALL MATH PROFESSOR HONORED WITH STATEWIDE AWARD

Bonita Lawrence, a mathematics professor at Marshall University, has been honored by the Faculty Merit Foundation of West Virginia with its "Professor of the Year" award. Lawrence, a faculty member at Marshall since 2001, received a \$10,000 cash prize. She sits on the Marshall University Faculty Senate and the university's Open House for prospective students and parents, and has received several awards at Marshall for excellence in teaching, including the Charles E. Hedrick Outstanding Faculty Award.





## **NORM AUGUSTINE: "It's a dreadful mistake to be complacent."**

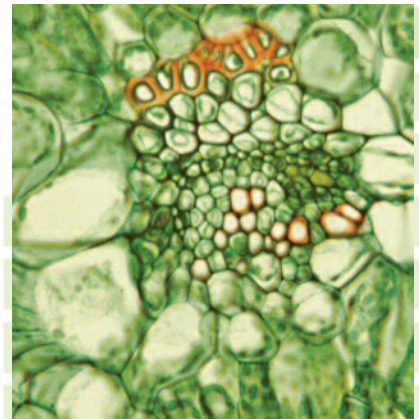
Norm Augustine knows a lot about the business world, and on April 8 he shared his knowledge with the WVU community. The retired chairman and chief executive officer of Lockheed Martin Corp. presented "Want Jobs? Invest in Our Universities" as part of the 2010 David C. Hardesty Jr. Festival of Ideas. It's time, Augustine said, for Americans to use research and innovation as a springboard for success. "It's a dreadful mistake to be complacent," he said. "No nation has the right to assume continued prosperity." Augustine was a member of the President's Council of Advisors on Science and Technology under Presidents Bill Clinton and George W. Bush.

## **MARSHALL FORENSIC CHEMISTRY PROFESSOR NAMED TO EDITORIAL BOARD**

Dr. J. Graham Rankin, associate professor of the Marshall University forensic science graduate program, has been named to the editorial board of the Journal of ASTM International. One of the largest voluntary standards development organizations in the world, ASTM International is a source for technical standards for materials, products, systems and services. A forensic chemist, Rankin will serve as associate editor of the journal's medical, health and safety section, which is expanding its coverage of forensic science.

## **WVU CANCER CENTER FEATURED IN WEST VIRGINIA MEDICAL JOURNAL**

The Mary Babb Randolph Cancer Center (MBRCC) at WVU's Robert C. Byrd Health Sciences Center was featured extensively in a recent issue of the West Virginia Medical Journal. The special supplement focused on breast care and included articles written by the center's investigators and invited collaborators across the state. Dr. Scot Remick, MBRCC Director, and Dr. Laura Gibson, Deputy Director, said this supplement was an excellent reflection of the emerging partnerships the center is fostering statewide.



## **INTERESTED IN REVIEWING PROPOSALS?**

Are you interested in serving as a reviewer for the West Virginia Higher Education Policy Commission's research grant programs? We are always looking for talented faculty with an eye for promising research in all STEM areas. For more information, contact Dr. Jan Taylor at [jan.taylor@wvresearch.org](mailto:jan.taylor@wvresearch.org).



## COMMENTARY

*By Joe Manchin III  
Governor of West Virginia*

### TECHNOLOGY PARK GIVES US A CHANCE TO ACHIEVE GOALS

After much deliberation, I announced in late February that the State of West Virginia is committed to revitalizing the South Charleston Technology Park and requested the state's Higher Education Policy Commission to move forward on a donation from Union Carbide Corporation, a subsidiary of The Dow Chemical Company, of buildings and land to the state.

I would not commit state resources to a project that I did not fully believe would be very productive and beneficial for the citizens of West Virginia. And, as a recent study by the Rockefeller Institute of Government says, there is a growing role for higher education in driving economic development – which is exactly what we hope to achieve at the technology park.

The study found that higher education systems across the country are taking leading roles in their states' economic development efforts. West Virginia's higher education system is certainly in that category – and we simply must take the smart, bold steps necessary to build on the research strengths of our institutions as our country moves into the era of an "innovation economy."

Our new West Virginia Education, Research and Technology Park will help us focus on developing new technologies and continue seeking ways to further diversify our economy. The park will allow us to better connect higher education and research investments with business and economic opportunities.

We must think innovatively if we are going to compete with other states and globally in the future. We already are sending more young people to college than ever before – and with initiatives like "Bucks for Brains," we are spending more than ever to encourage research and development. But we must turn these investments into high-tech jobs and opportunities for our youngest and brightest.

This decision was about saving jobs and creating new ones. And it was about breathing new life into the technology park and our state's economy.

The park has a long and unique history that brought some of the world's foremost researchers to the Kanawha Valley. In the 50 some years since the park was created, countless amazing products were developed there. And I believe the park holds tremendous promise for us to see that type of innovation again.

We have work to do to ensure the park meets our needs and is as efficient as possible, but I believe this is a once-in-a-lifetime opportunity. Forward-thinking moves like this are the only way we will break from the mold and redesign our state's future economy to ensure that our citizens have the most promising opportunities we can provide.

I sincerely thank all who were involved in this process. It was a tough decision, we had to weigh every factor, but, in the end, it was the right decision and the entire state will benefit.

## FROM THE VICE CHANCELLOR: *The Science behind Success*



When the federal and state governments place their support and trust in West Virginia's faculty researchers, they in turn put their expertise to work – and are reaching new levels of success as a result.

In 2006, West Virginia EPSCoR was awarded a \$9 million Research Infrastructure Improvement (RII) award from the National Science Foundation, matched with an additional \$4.5 million from

the state, to support scientific research at West Virginia University, Marshall University and West Virginia State University.

Remarkably, faculty members participating in this project have attracted more than \$40 million in external funding support to West Virginia – representing a three-to-one return on this investment. And, as we note in this edition of *The Neuron*, many of these careers have just begun to blossom.

With West Virginia's latest EPSCoR RII proposal now pending with the NSF and the West Virginia Research Trust Fund in place, we are faced with another opportunity to intensify significant investments in our state.

These efforts are the kind of infusions that create sustainable research. They prompt exciting, important and potentially historic work in the immediate future – and serve as a catalyst for enhanced research and development expansion down the road.

With the leadership we provide in advancing competitive research across West Virginia, the Commission helps create the setting for growth and success – but it is our scientists who provide the backbone of success.

As we continue this unprecedented expansion, I look forward to seeing the new science, ideas and innovations they have in store.

Carpe Diem,

Paul L. Hill, Ph.D.

Vice Chancellor for Science and Research  
West Virginia Higher Education Policy Commission

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