West Virginia
Research Trust Fund

Report on the Research Trust Fund to the Governor
and the Legislative Oversight Commission on Education Accountability

West Virginia Higher Education Policy Commission

Science and Research Division
www.wvhepc.edu
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2017

2017 Report on the Research Trust Fund (RTF)

Background

Outlined in Series 48, Research Trust Fund Program, the Commission receives annual reports from institutions and is required to submit a combined annual report on the Research Trust Fund to the Governor and the Legislative Oversight Commission on Education Accountability (LOCEA) by January 1 of each year.

In compliance with this statutory requirement, the LOCEA is provided the annual report for 2016-2017 activities within the Research Trust Fund for review, and approval. The 2017 report is the ninth in a series of annual reports provided by staff since the program's inception in 2008.

RTF Activities through August 2017

The Commission completed its initial implementation plan during the fall of 2008 which resulted in Title 133 Legislative Rules Series 48, subsequently approved by the legislature during the 2009 regular session. The rule establishes guidelines, procedures and documentation standards for the distribution of funds in the West Virginia Research Trust Fund. The rule designates the Vice Chancellor for Science and Research as the administrator of the program, under the general direction of the Chancellor and the Commission. The final rules are available at https://www.wvhepc.org/resources/rulesandpolicies_files/Series%2048%20%284-16-09%29.pdf. .

Commission staff created an electronic "Match Request System" (MRS) in 2008 that allowed secure transactions for RTF requests made by the universities. All requests, documentation and invoicing are permanently recorded in files that allow sorting, analysis and up-to-date balance information. The MRS was cross referenced with university records annually to ensure accuracy in drawdown reporting for previous reports.

Required "Research Plans" specified by the legislation and approved by institutional Boards of Governors' were received from both West Virginia University and Marshall University. Both institutional plans are on file at the Commission and are found to be generally compliant with legislative requirements.

The RTF financial account was established in late June 2008 by the State Auditor and made accessible to Commission staff for distribution. All transactions from this fund were completed in 2013.

Interest funds generated by the RTF account have been separately tracked for distribution to State Colleges as defined by the Legislature. On May 15, 2009, the Commission released the first competitive request for proposals for RTF interest funds collected on the account specifically for state colleges and the WV School of Osteopathic Medicine in accordance with provisions of §18B-18A-10 of the code. A second request for proposals was issued on March 9, 2010 a third on June 2, 2011, a fourth on May 30, 2012 and a fifth on September 21, 2012. Proposals for up to $100,000 each were received from eligible institutions and subsequently reviewed by external peers for program merit. Two awards were issued in 2009, two in 2010 and one in 2011 as a result. No applications were received in response to the May 2012 request for proposals. A request for proposals was issued on September 7, 2012 – one institution was awarded. A final award was made on May 6, 2013

The institutions who received awards from the RTF for State Colleges and Universities were Shepherd University, Fairmont State University, West Liberty University, West Virginia State University and West Virginia University Institute of Technology.

The Research Trust Fund has been fully matched and no additional funds are available for distribution.

Marshall University and West Virginia University reports for 2017 are attached.

Marshall University
Research Endowment Plan Annual Report
2016-2017

Submitted to the Division of Science and Research at the
West Virginia Higher Education Policy Commission

I. Summary

The West Virginia Research Trust Fund program has created sixteen endowments at Marshall University to fund allowed research-related activity. Over fifteen million dollars of private donations and the fifteen million dollars of state match have been invested in the Marshall University Foundation and Marshall University Research Corporation, respectively. These endowments span research areas from Engineering to Clinical and Translational Research and specify uses from direct research support to student research stipends. In FY 2013, the full $15MM in gifts and pledges was raised, along with an excess of over $800,000.

As of June 30, 2017, the Marshall University Bucks for Brains Endowments totaled $35.4MM, with $1,200,000 of endowment proceeds expended over the life of the program. FY 17 expenditures totaled $560,000. Earnings to date have amounted to $5.78MM.

II. Review of the Marshall University Research Endowment Plan

Marshall's original Research Endowment Plan approved by the University's Board of Governors in 2008, directed donations to:

- Endowment of the Marshall Institute for Interdisciplinary Research (MIIR), continuing with the plan laid out in Marshall's application to the Eminent Scholars Recruitment and Enhancement (ESRE) initiative; and

- Advancement of Intelligent Transportation Systems research at the Rahall Transportation Institute (RTI).

In November 2010, the Marshall University Board of Governors approved a Research Trust Fund Addendum (Appendix One) that broadened the recognition of Biomedicine/ Biotechnology as a focus for donor activity across the University, and further included aspects of Engineering, Environmental Science and the Physical Sciences.

III- Endowed Research Area Highlights

A brief update on highlighted activities of the endowments is included below. A comprehensive summary of the endowments is included in previous versions of this report. The current corpus balances and earnings-to-date are provided in Table One, at the end of this section.

FY 2016 activities associated with cellular sodium-potassium pump (Na/K ATPase) signaling and oxidative stress in addressing a variety of disease states have continued in the School of Medicine. Important discoveries have been made in the area of non-alcoholic fatty liver disease, atherosclerosis and uremic cardiomyopathy

Based on their recent research focusing on a peptide, pNaKtide, designed to block the oxidant amplifying function of Na/K ATPase, researchers at the Marshall University Joan C. Edwards School of Medicine have successfully demonstrated that pNaKtide can attenuate the development of experimental nonalcoholic fatty liver disease (NAFLD) and atherosclerosis. These findings were published in the March 15 edition of "*Scientific Reports*," an online journal from the publishers of *Nature.*

In collaboration with the University of Toledo and New York Medical College, Marshall University Joan C. Edwards School of Medicine researchers extended their work on the signaling function of the sodium-potassium pump to an important application that could potentially lead to new treatment options for patients with kidney disease. The study, "Attenuation of Na/K-ATPase Mediated Oxidant Amplification with pNaKtide Ameliorates Experimental Uremic Cardiomyopathy," was published in *Scientific Reports*, an online journal from the publishers of Nature.

The findings of the study suggest that reduction of oxidant stress by introduction of the peptide, pNaKtide, can ameliorate experimental uremic cardiomyopathy, the cardiac disease which almost always complicates advanced renal failure.

New projects in Sports Medicine, addiction and dementia research have been initiated in 2017 and will be detailed in future reports.

B-Current Fund Balances

The current fund balances for the Marshall University Research Trust Fund Endowments are shown in Table One, below, along with earnings since inception. Expenditures in FY 2017 amounted to $560,000.

Table One- Fund Balances for Marshall University's Research Trust Fund Endowments at the End of FY17 (Reflecting MURC and MUF holdings as of June 2017

#	Fund	Corpus	Total Earnings Since Inception
1	**MIIR**	6,614,731	1,540,983
2	**RTI**	350,000	99,641
3	**Maier Dementia Research**	2,000,150	450,560
4	**Fletcher Engineering**	1,693,855	331,927
56	**Pew River Research**	530,200	121,783
7	**Brickstreet Safety Research**	441,600	108,707
8	**Chemistry SURF**	242,395	48,194
9	**Zacharias OB/GYN**	796,714	176,841
10	**Translational Sports Medicine Research**	10,126,650	1,813,807
11	**Eiselstein Scholarship**	111,100	13,148
12	**Tarter Scholarship**	44,970	6,016
13	**Beckelhimer Scholarship**	105,000	14,726
14	**Hanshaw Geriatric Research**	1,000,000	133,001
15	**Rezulin Endocrinology Research**	1,782,021	292,932
16	**Brickstreet Wellness Research**	5,000,000	628,371
	Total	30,839,386	5,780,638

Appendix One- Marshall University's Research Trust Fund Addendum

The University's directed research endowment plan has concentrated initially in two domains of interdisciplinary research, which are strengths at Marshall: research clusters in biomedicine/biotechnology/ bionanotechnology and transportation technology/logistics. Marshall's Research Trust Fund activities are to be expanded to include the following areas:

I. Engineering

Engineering is a foundational discipline essential to the development and implementation of research in the approved areas in the Research Trust Fund legislation[1]. Marshall has recently achieved ABET accreditation of its engineering program, and has experienced dramatic facilities growth with the construction and occupation of The Arthur Weisberg Family Engineering Laboratories facility and is planning for the future addition of an Advanced Engineering and Technology Center Complex. Development of robust undergraduate and graduate programs and the associated integral research opportunities are essential to developing and enhancing the capabilities and profile of the school.

Match from the Research Trust Fund will be requested to enhance private donations for endowed professorships and other research-related positions and initiatives in all aspects of Engineering as they relate to the allowed subject areas of the Research Trust Fund Program and the associated uses allowed in the legislation.

Two examples of gifts that have been received in support of engineering endowments are included, and a third solicitation is discussed:

A. Applied Research- Safety Engineering Program

Risk management is a highly specialized field that involves applying the principles of safety engineering and industrial hygiene and integrating them with

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[1]

4.3.1. Energy and environmental sciences;

4.3.2. Nanotechnology and materials sciences;

4.3.3. Biological, biotechnical and biomedical sciences;

4.3.4. Transportation technology and logistics;

4.3.5. Biometrics, security, sensing, and related identification technologies; and

4.3.6. Gerontology.

economic and financial analysis. Marshall University will expand its Research Trust Fund Plan in this area important to transportation and logistics and energy to support an endowment in risk management research. The proposed endowment will support the development of research expertise in the school of engineering in the area of risk management, a highly interdisciplinary pursuit at the interface of management, engineering and applied mathematics.

The proposed applied research employs advanced risk management concepts and research to identify, trend, estimate and reduce workplace hazards in industry based in WV. The area will be supported by a $100,000 endowment received from BrickStreet and the corresponding state match.

Risk management is of particular interest to the energy industry in our state because of the safety and economic risks associated with the extraction process. In energy, risk management research is essential to find new ways to:

- deal with its high element of monetary risk due to the uncertainty of the economic and regulatory outlook
- reduce the physical risk associated with extraction and development activities, and improve the safety of individual employee

In transportation and logistics research, risk management has become central to understanding many critical elements such as:

- the robustness and resilience of our transportation systems to interruptions due to system load, natural phenomena, and man-made disruptions
- the risks associated with transport of hazardous materials and the potential benefits of mitigation of those risks
- the robustness of logistics networks
- the risks associated with logistics and supply chain outsourcing

These benefits are of particular relevance to the state given current events, and are particular interests of the donor.

B. Mechanical Engineering

Mechanical engineering applies the principles of physics and materials science for analysis, design, manufacturing, and maintenance of mechanical systems. Mechanical engineers use the core principles of mechanics, kinematics, thermodynamics, materials science, and structural analysis along with tools like computer-aided engineering and product lifecycle management to design and analyze items as diverse as manufacturing plants, industrial equipment and machinery, heating and cooling systems, motorized vehicles, aircraft, watercraft, robotics, medical devices and more.

The field has continually evolved to incorporate advancements in technology, and mechanical engineers today are pursuing developments in such

fields as composites, mechatronics, and nanotechnology. Mechanical engineering overlaps with aerospace engineering, civil engineering, electrical engineering, and petroleum engineering to varying amounts.

A gift from the Fletcher family will endow a founding Chair of Mechanical Engineering. Mechanical Engineering is an important discipline in Bioengineering and energy sectors. This endowment is essential to developing a Department of Mechanical Engineering, by attracting a senior-level professor to Marshall, with his/her associated research programs.

Another area that is endorsed by the Board of Governors for planning and an active source of solicitation is:

C. Bioengineering

In the translation of biomedical and biotechnology advances, bioengineering is a lynchpin in bridging the transition from academe to commercialization. Marshall University is planning to develop a Bioengineering Department contemporaneously with the construction of the Applied Technology and Engineering Complex. The development of the Department would follow a trajectory very similar to that of Mechanical Engineering, with the attraction of a founding research scientist/bioengineer.

"Biological engineering, biotechnological engineering or bioengineering (including biological systems engineering) is the application of engineering principles to address challenges in the life sciences, which include the fields of biology, ecology, and medicine. Biological engineering is a science based discipline founded upon the biological sciences in the same way that chemical engineering, electrical engineering, and mechanical engineering are based upon chemistry, electricity and magnetism, and statics, respectively"[2].

"Biological Engineering can be differentiated from its roots of pure biology or classical engineering in the following way. Biological studies often follow a reductionist approach in viewing a system on its smallest possible scale, which naturally leads toward the development of tools such as functional genomics. Engineering approaches using classical design perspectives are constructionist, involving the building and research of new devices, approaches, and technologies from component concepts. Biological engineering utilizes both of these methods in concert relying on reductionist approaches to define the fundamental units, which are then commingled to generate something new". [3]"Although engineered biological systems have been used to manipulate information, construct materials, process chemicals, produce energy, provide

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[2] Cuello J.C., "Engineering to biology and biology to engineering, The bi-directional connection between engineering and biology in biological engineering design", Int. J. Eng. Ed., **21**,1-7 (2005).
[3] Riley MR," Introducing Journal of Biological Engineering", Journal of Biological Engineering **1**, 1 (2007).

food, and help maintain or enhance human health and our environment, our ability to quickly and reliably engineer biological systems that behave as expected remains less well developed than our mastery over mechanical and electrical systems". [4]

Given Marshall's research strengths in the biological and biomedical sciences and the emphasis of new initiatives, like the Marshall Institute for Interdisciplinary Research (MIIR), on translating key research findings into commercialization, the discipline of bioengineering sits at a nexus of opportunity for the University. It will be a critical element in fully developing the potential of Marshall's applied research enterprise and its translation to economic development.

II. Mathematics and the Physical Sciences

Mathematics and the Physical Sciences are basic sciences that have relevance to all aspects of the allowed areas of the Research Trust Fund legislation. Research Trust Fund match will be sought to enhance private donations supporting endowed professorships and other research-related positions and initiatives focusing on research in the allowed areas in these disciplines.

The first application will be for an endowed rotating professorship to promote an undergraduate summer research experience in Chemistry.

This match for the undergraduate research endowment is being requested under the Research Trust Fund because undergraduate summer research in Chemistry is relevant to so many of the legislatively enabled areas:

- Chemistry is one of the fundamental underpinnings of nanoscience because of the molecular nature of the discipline
- The Department of Chemistry at Marshall University has core groups in biochemistry/biotechnology and materials science
- Faculty members also work on energy research and molecular energetics.

[4] Endy D, "Foundations for Engineering Biology", Nature, **438**, 449-4 (2005).

WV Research Trust Fund

Annual Report

from

West Virginia University

August 15, 2017

Introduction

This ninth annual report describes the history of the Research Trust Fund, responds directly to the reporting requirements outlined in Series 48 (§ 133-48-14), and lays out the proposed spending plan for the earned interest and carry over funds from each endowment for FY 2018.

History of the Research Trust Fund (2008-2009)

In March 2008, the West Virginia Legislature enacted Senate Bill 287, commonly referred to as the Research Trust Fund, as an effort to build a critical mass in selected areas of research and thus lay the groundwork for future economic development. The initial Bill provided a five-year window for the deposit of qualified donations into research endowments. Senate Bill 239 (Passed March 12, 2011) amended §18B-18A-9 of the Code of West Virginia to provide a seven year window. Senate Bill 287 committed $35 million to West Virginia University as a basis for a 1:1 match with private dollars to create endowments that would provide a sustainable source of funds for research and development. West Virginia University's approved Strategic Research Plan identified four areas for investment:

- Energy and environmental sciences;
- Nanotechnology and material science;
- Biological, biotechnological, and biomedical sciences; and
- Biometrics, security, sensing and related identification technologies.

A brief description of each research area is available at http://research.wvu.edu/home/research_trust_of_west_virginia_university. These areas were selected because they complemented the expertise of WVU's faculty, were critical issues of importance to the public, and were at the core of WVU's land-grant mission.

An Addendum to WVU's Strategic Research Plan for the Research Trust Fund was approved by the WVU Board of Governors in December 2010 and incorporated therein. Three modifications were made:

1. Adding forensic sciences as an area of emphasis under the biometrics, security, sensing, and related identification technologies, providing the opportunity for private investment into this area of research.

2. Adding a Library endowment to support the acquisition of materials in the four research areas, clarifying the importance that library resources provide to a vibrant research agenda.

3. Removing the language “no research area may receive more than $17.5 million in private donations within the first two years,” allowing WVU to maximize private investment regardless of focus area.

Achieving the Goal: $70 million in Private and State Endowments

During the first four years after the inception of the Research Trust Fund, West Virginia University received gifts and pledges totaling $35 million, the total amount allocated to the University through the Research Trust Fund initiative. Each endowment was qualified by the West Virginia University Board of Governors and thus eligible for state matching funds. **Thus the University’s goal was achieved**.

The seven-year pledge period has officially concluded. The 85 endowments in Appendix A represent the final portfolio established under the Research Trust Fund initiative. These endowments include five generic types of gifts: 12 chairs and professorships, 12 undergraduate scholarships, 14 graduate fellowships, 2 graduate or undergraduate fellowships, 43 broad-based research support funds, and 2 library endowments.

Compliance with Legislative Rule for Research Trust Fund

Three specific reporting requirements are identified in Series 48 (§ 133-48-14), the Research Trust Fund Program.

1. 14.1. By August 15, 2009, and annually thereafter, each participating institution shall provide an annual report to the Commission that includes a full accounting of the trust funds, endowment proceeds, and adherence to the objectives established by the research plan.

2. 14.2. Each participating institution shall detail in its annual report to the Commission the total amount of qualified donations received, the investment earnings realized and any anticipated expenditures of the research endowment proceeds in its annual operating budget.

The data in APPENIDX A summarize much of the information requested by the Legislative Rule.

Through June 30, 2017 the following results have been achieved:

- **FY17 Market Value for all the Private RTF Endowments**

The market value of Directed Research Endowments established with private gifts invested in the Research Trust Fund Program of the WVU Foundation Endowment for fiscal year ending June 30, 2017 is $41,911,374.

- **FY18 Spend Available for the Private RTF Endowments**

The available proceeds from Directed Research Endowments established with private gifts invested in the Research Trust Fund Program of the WVU Foundation Endowment for FY18 are $1,731,197.

- **FY17 Market Value for all the State RTF Endowments**

The market value of Directed Research Endowments established with trust distributions (state funds) to the Research Trust Fund Program of the WVU Foundation Endowment for fiscal year ending June 30, 2017 is $39,874,121.

- **FY18 Spend Available for the State RTF Endowments**

The available proceeds from Directed Research Endowments established with trust distributions to the Research Trust Fund Program of the WVU Foundation Endowment for FY18 is $1,498,012.

- **NOTE**: During the period from March 08, 2008 to June 30, 2012, the WVU Foundation received 19 distributions from the Research Trust Fund totaling $35,000,000; these dollars provided the matching funds for 1210 qualified gifts (donations and pledges) to Directed Research Endowments established under the Research Trust Fund.

3. 14.4. Each participating institution's research corporation and/or foundation shall provide the Commission with an audited financial statement annually. These statements shall be treated as confidential.

A copy of the audited financial statements for years ending June 30, 2016 and 2015 for the WVU Foundation has been forwarded, under separate cover, to the Policy Commission through Director Jan Taylor. Because of timing of submission of this report relative to the receipt of the audited financial statement, the audited financial statement of the WVU Foundation, Inc. will always be a year in arrears.

Impact of the Research Trust Fund

Vice President for Research Fred King remarked previously that: “The Research Trust Fund is not only an investment in our University, it is an investment in the future of our state. We know that research and innovation are the key economic drivers as we move forward in the 21st Century and compete in a global economy. The ideas generated and the students educated through the endowments establish under the Research Trust Fund initiative provide a basis for West Virginia’s future prosperity. We are thankful to the donors and the West Virginia legislature for their confidence in our ability to deliver the innovation and education essential to the state’s economic future.”

To place Vice President King's remarks in a more specific context, WVU learned on February 1, 2016, that it was classified as an R1 or highest research activity, university by the Carnegie Classification of Institutions of Higher Learning, a ranking is shared by only 114 other universities in the United States. This ranking authenticates the quality of WVU's research on the global stage. In FY 2017, WVU faculty received $140 million in externally sponsored grants and contracts.

President Gordon Gee continues to make the critical point that WVU must help West Virginia reshape its economy for a brighter future. Three critical pillars undergird the reshaping of the state: education, healthcare, and broad-based prosperity. The institution's research investments, the research funds generated by our faculty, and the support provided by the Research Trust fund set the foundation on which these pillars rest.

Three recent awards illustrate the institution's efforts to make good on its commitments. In the field of education, the WVUteach program was previously awarded a $1.45 million grant from the National Math and Science Initiative to develop an innovative STEM educator preparation program for training high school teachers. To move West Virginia's economy forward, there is a demand for a workforce capable of performing technology-drive jobs. Well-prepared teachers are critical to the education of our students. A new $1.2 million National Science Foundation grant was recently received to train STEM teachers of tomorrow. This new award will create a partnership with the Doddridge and Marion County School districts to support at least 25 new high school teachers over the next four years.

WVU remains dedicated to improving health in West Virginia. A coalition of federal agencies, universities, hospitals and clinics will benefit from a $55 million grant that will develop programs to battle addiction and cancer and reduce the impact of cardiovascular and neurological diseases. The West Virginia Clinical and Translational Science Institute successfully competed for funding from the National Institutes of Health for a five-year $20 million grant to improve health outcomes in West Virginia. When combined with $35 million in matching money from in-state partners, the impact of this grant is significant and it will enable the implementation of statewide programs that will lead to better health for West Virginians.

"By reinventing healthcare, we can ensure that West Virginians thrive – not merely survive," Gee said. The income from RTF accounts dedicated to healthcare will aid in our efforts to improve the lives of the citizens of our state.

To enhance our state's prosperity, WVU has mobilized its faculty resources to address global energy needs. Vice President King noted that: "The ever-increasing demand for energy can no longer be met by a handful of sources, but will require a stable of technologies for cleaner and more sustainable technologies, better storage, more modern infrastructure and cheaper, more efficient methods that will increase

production." We must to seek "21st century solutions for our nation's need for affordable, abundant and clean energy."

West Virginia University has always been a national and global leader in the energy field. As an example of a 21st century solution, WVU received a $1.25 million award from the Department of Energy's Advanced Research Projects Agency-Energy to develop technologies for converting electrical energy from renewable resources into energy-dense carbon-neutral liquid fuels. This project utilizes an innovative ammonia synthesis technology to enable long-term energy storage and long-distance renewable energy delivery from remote, isolated locations. This is the third award to WVU through this highly competitive program within the DoE.

WVU is committed to using its RTF resources to help shape the state's future in education, healthcare delivery, energy, and economic prosperity. For more information about the three awards referenced herein, see the WVU Research web site or contact Dr. Fred King, Vice President for Research

Business Plan

In addition to the legislatively mandated reporting requirements, the Higher Education Policy Commission requires a business plan for each research area. APPENDIX A reflects the anticipated use of the money available to spend in FY18.

In FY17, $6,207,319 of Research Trust Fund dollars, both that from private accounts and matching state accounts, was spent on research – for scholarships, fellowships,

For FY18, $12,023,964 will be available. This number includes the proceeds from each private endowment and its equivalent state matching endowment plus any unspent money from the preceding year. Of this amount, $3,229,209 will come from interest earned on both the private endowments and that from the matching state endowments established from the Research Trust Fund; $8,794,755 will come from unspent funds from the previous year. The significant amount of interest dollars reflects the positive impact of the stock market and the fact that all endowments are fully funded. All funds for each endowment are distributed according to the intent of the respective endowment.

WVU looks forward to the significant and sustained impact that programs supported by the Research Trust Fund will have on addressing some of the state's and the nation's most important issues in education, energy, health care and security.

APPENDIX A. Endowments established in the West Virginia University Foundation under the Research Trust Fund program and their anticipated use in Fiscal Year 2018. Amounts available include proceeds from endowments plus unspent funds from previous years.

Fund Name	Brief Description	FY 2018 Spend	Anticipated Use
		Total	
Frederick P. Jr. & Joan C. Stamp Cancer Research	Broad-based Research Support	$19,095	Operational support for ongoing research
Norma Mae Huggins Cancer Research Endowment	Basic and Clinical Colon Cancer Research	$64,839	Operational support for colon cancer research
Walter H. Moran Jr. General Surgery Resident Research	Research Opportunity for Surgery Resident	$135,257	Stipend for resident to engage in research
Schoepp Neurosciences Research Student Support	Graduate Fellowships and Support for Research	$28,007	Support for student research activities
Verizon WV for Biometrics	Broad-based Biometrics Research	$63,885	Operational support for ongoing research
Raymond Brooks Vanscoy Cancer Research Endowment	Broad-based Cancer Research	$24,674	Operational support for ongoing research
Allen S. Pack Endowment for Mining Engineering	Energy Research in Mining Engineering	$27,548	Operational support for ongoing research
L. Zane Shuck Laboratory Endowment in Nanobiotechnology	Facilities Support in Nano-biotechnology	$23,893	Supplies and equipment for a shared facility
Alpha Natural Resources Endowment for Energy Research	Energy and Environmental Research	$89,848	Supplies and equipment for two new faculty
Alan Susman Cortico-basal Ganglionic Degeneration Research	Degenerative Neurological Research	$66,918	Projects that lead to extramural funding
Blaine S. West Endowment for Civil and Environmental Engineering	Broad-based Research Support	$64,002	Part of start-up packages for two new faculty
William J. Maier, Jr. Chair of Research	Create a Chair in Biomedical Research (Charleston Division)	$487,149	Hold until Chair is appointed
Branson-Maddrell Endowed Professorship in Orthodontics	Create a Professorship in Dentistry	$126,405	Salary enhancement for recipient of the professorship
George B. Bennett Dean's Research Opportunity Endowment	Broad-based Research Support	$257,026	Develop new research opportunities

E. Elizabeth Morgan Cancer Research	Broad-based Research Support	$4,711	Operational support for ongoing research
Badzek Family Endowment for Nursing Research	Nursing Research to Support Quality of Life	$13,203	Nursing research supporting the Institute
Ruth and Robert Kuhn Nursing Faculty Research	Broad-based Research Support	$12,452	Seed grant for new research effort
Hall - de Graaf Endowment for Women in Science & Engineering	Research Support for Women, Faculty and Students, in STEM Disciplines	$9,807	Operational support for ongoing research
Fithian Family Foundation #2/ Behavioral Medicine-Psychiatry	Research Support in Behavioral Medicine	$21,185	Operational support for ongoing research
WVUH Evidence Based Practice Research Professorship/Nursing	Create a Professorship	$153,705	Hold until Professorship is created
Grace C. Clements Speech Pathology and Audiology Research	Broad-based Research Support	$17,627	Operational support for ongoing research
Virginia Oil and Gas Research Endowment for PNGE	Research Activities in Appalachian Shales	$21,392	Operational support for ongoing research
Michael Baker Corporation Endowment/ CEE	Broad-based Research Support	$35,698	Operational support for ongoing research
Darrell & Diane Williams Research for PNGE	Research Activites in Appalachian Shales	$12,193	Operational support for ongoing research
Preservati Cancer Research	Broad-based Research Support	$25,645	Operational support for ongoing research
Martha Gaines & Russell Wehrle Pediatric Research Endowment	Broad-based Research Support	$15,765	Operational support for ongoing research
E. Jane Martin Research Doctoral Fund	Research Support for Doctoral Students in Nursing	$11,937	Support research of doctoral students
John T.& June R. Chambers Chair of Oncology Research	Create a Cancer Research Chair	$347,866	Hold until chair is created
Christopher Cline Chair in Orthopedic Surgery	Create a Chair in Orthopedic Surgery	$444,176	Hold until chair is created
Mabel C. Phares Leukemia Research Endowment	Broad-based Research Support	$76,672	Support for leukemia research
Gary and Lisa Christopher Graduate Fellowship	Create a Graduate Fellowship in CEMR	$47,564	Support for a student who will work in industry upon graduation
WV United Health System Evidence-	Research Awards for Faculty and	$4,787	Annual support for ongoing research

Based Nursing Practice Research	Students in Nursing		
Mike Ross Family Pediatric Diabetes Research Endowment	Broad-based Research Support	$191,309	Support for faculty engaged in research in pediatric research
Van Wyk Cancer Research Endowment	Broad-based Research Support	$4,359	Operational support for ongoing research
Robert T. Bruhn Physics Research Endowment	Broad-based Research Support	$29,355	Operational support for ongoing research
Women in Science and Engineering Giving Circle Endowment	Support for the Women's Giving Circle	$9,332	Research support for women faculty and students in RTF areas
Jarrett Family Research Endowment for Dentistry	Research Support in Orthodontics	$41,375	Support for faculty guided research projects for pre/post doctoral students
Donald R. & Linda E. Holcomb Research Endowment Dentistry	Braod-based Research Support	$40,659	Support for pilot research and bridge funds
Arch Coal Inc. Endowment for Mine Health & Safety Research	Mine Health and Safety Research	$95,362	Support for the continual study of mine safety and the health of mine workers
Shaw Pathology Research	Broad-based Research Support	$26,310	Support for ongoing faculty research
Dr. Mohindar S. Seehra Research Award	Physcis Doctoral Student Awards	$14,129	Awards for meritorious doctoral students
Oleg D. & Valentina P. Jefimenko Library Resources #2	Library Resources Endowment	$16,713	Acquire library resources for physics
Frank and Susan Klatshin Cerminara Endowment	Research Support for Industrial & Safety Management Engineering	$9,106	Support for ongoing faculty research
Nesselroad Family Glaucoma Research	Glaucoma Research in WVU Eye Institute	$26,091	Support for research directed to glaucoma
Salvatore and Josephine Cilento Research Endowment	Broad-based Research Support in CEMR, Preference to Chemical Engineering	$3,282	Support for faculty research
Statler Research Endowment	Support for 3 Statler Chairs and a Graduate Fellows Program in CEMR	$3,430,177	Support for fossil-energy research
WVU School of Medicine Research Endowment	Broad-based Research Support	$182,186	Research support funds
Quad/Graphics Chair in Internal Medicine, Eastern Division	Create a Research Chair	$448,640	Hold until Chair is appointed
James H. Walker Chair of Pediatric Cardiology	Create a Research Chair	$237,493	Support for the Walker Chair, Dr. William Neal
James A. Kent Endowment for	Broad-based Research Support	$32,168	Supplies and equipment for recently hired faculty

Biomedical Engineering

Osborn Professorship in Hemato-logical Malignancies Research	Create a Research Professorship	$91,051	Support for the Osborn Professorship, Dr. Laura Gibson
BrickStreet Neurology Fellowship	Create a Graduate Student Fellowship	$57,002	Create a student fellowship
Robert E. Murray Chairmanship Mining Engineering Department	Create a Named Department Chairmanship	$230,846	Support for the Chair of Mining Engineering
Rita Radcliff-Deppe & Brian Deppe Fellowship Award	Create a Graduate Student Fellowship	$22,663	Create a graudate student fellowship
Oleg D. and Valentina P. Jefimenko Library Resources	Library Resources Endowment	$41,065	Acquire library resources to support research
Oleg D. and Valentina P. Jefimenko Physics Fellowship	Create a Graduate Student Fellowship	$20,282	Create a graudate student fellowship
WVU Hardwood Research Trust	Create a Graduate Student Fellowship	$80,666	Create a student fellowship
James P. Boland, M.D. Department of Surgery Endowed Research	Broad-based Research Support	$150,696	Operational support for ongoing research
WVU Ruby Scholars Graduate Research Fellowships	Create Merit-based Graudate Fellowships for Exceptionally Talented Students	$1,862,520	Create fellowships for highly meritorious students
Robert E. Pyle Chemical Engineering Graduate Fellowship	Create a Graduate Student Fellowship	$18,055	Support for a graduate student
James & Ruby Romano Civil & Environmental Engineering Endowment	Energy and Environmental Research Support	$159,125	Operational support for ongoing research
Robert& Stephany Ruffolo Pharmacy Graduate Fellowship	Create a Graduate Student Fellowship	$10,777	Research support for a graduate student in pharmacy
James and Betty Hall Fellowship	Create a Graduate Fellowship in CEMR	$26,256	Research support for a meritorious student
Stuart M. & Joyce N. Robbins Distinguished Prof/Epidemiology	Create a Distinguished Professorship	$391,477	Support for a professorship in School of Public Health
Academy of Chemical Engineers Graduate Fellowship	Create a Graduate Fellowship in Bioengineering in Chemical Engineering	$55,444	Support the research of a meritorious graduate student
J. F. Brick Chair in Neurology	Create a Named Chair in Neurology	$470,536	Ongoing support for the Brick Chair
Jack and Marietta Mullenger Fellowship	Create a Graduate Research Fellowship in CEMR	$11,321	Support for graudate student research in any RTF area
Research Trust Fund Jefimenko Professorship in Physics	Create a Professorship in Physics	$47,660	Hold until professorship is awarded

Wells Fargo Energy Group Scholarship	Create a Student Scholarship	$35,800	1 undergraduate student scholarship
Benjamin James Galford Research Scholarship	Create an Undergraduate Research Scholarhsip in Physics	$14,795	Support research activities of underdraduates
Carl Del Signore Foundation Graduate Fellowship	Create a Graduate Student Fellowship	$17,143	Support for a graduate student
George M. & Mary Freda Vance Medical Scholarship-Fellowship	Create a Student Scholarship/ Graduate Student Fellowship	$39,226	Create 1 prestigous post doctoral fellowship
William S. Clapper Mechanical & Aerospace Engineering Scholarship	Create Undergraduate Student Scholarships	$2,277	5 undergraduate student scholarships
Everette C. Dubbe Research Scholarship	Create a Undergraduate Student Scholarship	$9,806	3 undergraduate student scholarships
Oleg D. and Valentina P. Jefimenko Physics Scholarship	Create an Undergraduate Scholarship	$7,537	1 undergraduate student scholarhsip
James Bergen and Randy Monteith Anderson Scholarship in MAE	Create Undergraduate/Graduate Scholarhsips in Energy Research	$2,408	Support research by undergraduate students in energy and environment
Morton Scholarship	Create Scholarships for Students in CEMR	$13,400	Support undergraduate student research in energy
David VanDorn Sutton Scholarship	Create Undergraduate or Graduate Scholarships	$196,895	Support students in any of the RTF areas
Morrissey-Ropp Scholarship	Create Scholarships in Arts and Sciences in any RTF area	$6,797	Support for undergraduate student research
Martha Hopkins Hashinger Scholarship	Create a Scholarhsip in CEMR in Chemical Engineering	$2,463	Support for undergraduate student research
J. Leland & Clara Virginia (Grosscurth) Taylor Scholarship	Create a Scholarship in CEMR, Preference to Petroleum and Natural Gas	$9,643	Support for undergraduate student research
Mitchell-Morey Scholars Program	Create a Scholarship in Any RTF Area	$9,162	Support for undergraduate student research
Statler Research Scholars Program	Create Undergraduate Scholarhsip Program in CEMR	$98,030	Support for undergraduate students doing research
Bettie D. Gallaher Research Fellowship	Create a Graduate Fellowship in Any RTF Area	$219,712	Fellowship to be awarded to meritorious students
William E & Bonniegail Kucan Coleman Research Scholarship	Create Research Scholarship in any RTF Area	-$2,307	Support for undergardaute student research

TOTAL	$12,023,964