

December 11, 2020

The Honorable Henry McMaster, Governor of the State of S.C.
The Honorable Harry S. Peeler, President, and Members, S.C. Senate
The Honorable James H. "Jay" Lucas, Speaker, and Members, S.C. House of Representatives

Dear Governor McMaster and Members of the S.C. General Assembly:

On behalf of the S.C. Centers of Economic Excellence Review Board, I am pleased to provide you with the SmartState® Program 2019-2020 Annual Report and the 2019-2020 SmartState® Program Audit. We are proud to share with you the program's accomplishments and to report again this year an unqualified audit with no material findings. These reports highlight the tremendous success of SmartState®.

To date, the SmartState® Review Board has approved 51 research centers in areas such as biomedicine, pharmaceutical research, automotive engineering and transportation, energy, nanotechnology, information science, and advanced materials. Across these centers, 86 SmartState® endowed chair positions have been approved, and 74 appointments have been made and announced. As envisioned by the General Assembly in 2002, SmartState® is delivering significant returns on the state's investment on many fronts such as sponsored research, corporate partnerships, company relocations and startups, increased jobs in our state, and opportunities for young people at our universities, in industry, and as entrepreneurs. According to a recent study by the University of S.C.'s Moore School of Business, SmartState® is responsible for helping to create and support approximately 14,927 jobs in our state, which are associated with nearly \$3.2 billion in total economic activity and \$929 million in labor income for South Carolinians that would not exist otherwise. Of the total 15,842 jobs, 6,046 (38%) are high-paying knowledge economy jobs created directly through the program with an average salary of \$76,745, which is higher than the average annual salary among all jobs in South Carolina.

The SmartState® annual program report and audit are being transmitted in accordance with statute and made available to members of the S.C. General Assembly in electronic format through the S.C. Legislative Services Agency. You will also find a copy of the annual report and other program information available at www.smartstatesc.org. Should you desire a hardcopy annual report, please contact Dr. Argentini Anderson at the S.C. Commission on Higher Education at aanderson@che.sc.gov or 803.737.2276.

The SmartState® Review Board trusts the enclosed reports will be helpful to you in better understanding this important program and we look forward to working with you in the coming year and as the future of SmartState® is considered. As always, we extend our appreciation and thanks to each of you for the work you accomplish on behalf of higher education and academic research, and for the betterment of South Carolina and its citizens.

Sincerely,

Charles Kerekes

Charles Kerekes, Vice Chair, SmartState® Review Board

cc: The Honorable Richard Eckstrom, S.C. Comptroller General
 The Honorable Curtis Loftis, State Treasurer of S.C.
 Ms. Marcia Adams, Executive Director, Department of Administration
 Members, SmartState® Review Board
 Dr. Rusty Monhollon, President and Executive Director, S. C. Commission on Higher Education

Challenges to Opportunities SC CENTERS OF ECONOMIC EXCELLENCE 2019-2020 ANNUAL REPORT SmartState[®]

Table of Contents

- 1 Mission
- **2** Welcome
- **3** Meet the Board
- 4 About Our Program
- **6** SmartState Collaboration with Students Furthers New Technology Applications in Prosthetic Limbs
- **8** Translational Cancer Therapeutics Makes Significant Strides to Test Anti-Cancer Drug for Melanoma
- **10** Vehicle Electronic Systems Integration Awarded Phase II of NSF Grant for ROSEHUB Center
- 12 The Economic Impact of the SmartState Program®
- **14** By the Numbers
- **16** SC SmartState Centers on the Frontline of COVID-19 Response
- 22 SmartState Centers & Endowed Chairs
- **32** SmartState Endowed Chairs
- **36** Contact

Our Mission

The South Carolina SmartState Program® serves the public's interest by creating incentives for the state's research universities, in cooperation with other institutions of higher education in the state, to raise capital from non-state sources to fund endowments for specialized research professorships. These professorships in turn serve as the nucleus for unique, university based research centers that cultivate critical, public-private industrial partnerships, expand the state's knowledge base, create well-paying jobs, enhance economic opportunities, and improve the quality of life for the people of South Carolina.



Welcome from the SmartState Review Board

The SmartState Review Board consists of eleven members who serve three-year terms. Three are appointed by the Governor, three are appointed by the President Pro Tempore of the Senate, three are appointed by the Speaker of the House of Representatives, one by the Senate Finance Committee, and one by the Chairperson of the House Ways and Means Committee. The Review Board oversees operations of the SmartState Program®. The presidents of South Carolina's three research universities serve as ex officio, non-voting members.

To My Fellow South Carolinians,

The SmartState Review Board is proud to share with you our 2019-20 annual report, Challenges to Opportunities. What an unprecedented year this has been—one of many challenges and yet also many highlights. Amidst these trying times, our remarkable program and its leaders adapted and persevered as they continued to provide unparalleled research achievements and funding milestones.

Inside, you'll find features highlighting accomplishments from each of our three research universities. These stories are merely a glimpse into the magnitude of research that is happening on our campuses. There are many incredible discoveries occurring within these SmartState Programs every day. I am proud to be a part of such an esteemed program that has received international recognition while prevailing through some unimaginable circumstances.

I want to give a special thanks to all those who support us, and acknowledge the vision of the

South Carolina's General Assembly members in creating this extraordinary SmartState Program. It is through our Program's leadership, financial generosity, collaborative business partnerships, and tireless research efforts that this state-of-the-art establishment is able to fulfill its promise to our state—a promise of an improved knowledge economy, a robust workforce with higher paying jobs, and a distinguished reputation for our state. We look forward to seeing what South Carolina's pioneers do next!

Karoly "Charles" Kerekes, Vice Chair SmartState Review Board Appointed by the Governor

Karoly Kerekes

Meet the Board



Karoly (Charles) Kerekes
Appointed by
the Governor



C.W. (Chuck) Garnett

Appointed by
the Governor



Lisa MainAppointed by the
Speaker of the House



Robert W. Pearce, Jr.
Appointed by the
Speaker of the House



Melvin C. Williams
Appointed by the President Pro
Tempore of the Senate



Roberta Bankhead Wood Appointed by the Chairman, House Ways & Means Committee

About Our Program

From challenges to opportunities, the year 2019-2020 is one that many will not soon forget. A year plagued by a pandemic, civil unrest, and economic upheaval has also been one that has presented opportunities and growth for our state's Research Centers of Economic Excellence.

Composed of world-class researchers, scientists, and experts, the SmartState Program® has persevered through this challenging time in American history to advance South Carolina's economic and knowledge fortunes. Through research and education, partnerships and investment from businesses, and the attraction of federal research dollars, SmartState has pivoted the state's knowledge economy to one of international competitiveness. We thank these endowed chairs for inviting us into their labs and research facilities to learn more about their amazing discoveries and experiences during a year of perseverance.

This report is just a small glimpse into some the incredible things that are happening inside the Centers of Economic Excellence. As the report showcases, these researchers are leading the nation in cutting-edge discoveries, ideologies, and industry solutions. Inside the lab of Dr. Kenneth

Tew, groundbreaking research is pioneering discoveries in anti-cancer treatment therapies to stop the high death rates from skin cancer. Dr. Venkat Krovi is leading Clemson's partnership within a national consortium to advance human well-being through robot and sensor research. And at the University of South Carolina, Dr. Michel van Tooren is working with Dr. Laura B. Cardinal in expanding students' access to focus on industry-driven research and development.

As shown in the Numbers Report, the knowledge economy fueled by the SmartState Program is a fundamental driver of regional growth. It is a key ingredient to a healthy South Carolina economy. South Carolina's sizable premium in wages is directly and indirectly related to the SmartState Program*.

These numbers and the stories inside this report are among many other noteworthy highlights of the SmartState Program* that demonstrate leadership and perseverance in a time that many have had to find ways to adapt to a "new normal." We invite you to turn the page and read more about the remarkable people and happenings that made the 2019-20 year so impactful within the Program.





JAMES P. CLEMENTS, Ph.D.

President

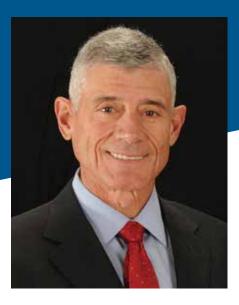
Clemson University

"The SmartState
Program® truly represents the power of public/private partnerships to make a positive difference for the State of South Carolina. It also continues to have a tremendous impact on Clemson University and our ability to recruit and retain top faculty and students, which ultimately makes the university and state more attractive to industry partners"



DAVID J. COLE, M.D., FACS
President
Medical University of South Carolina

"The South Carolina SmartState Program® is an important example of what's needed to transform and grow our state through the establishment of a knowledge-based economy. This aligns with MUSC's vision, to lead health innovation for the lives we touch, which embraces collaboration. drives innovation, and ultimately is fueled by the ability to recruit and retain world-class investigators."



ROBERT L. CASLEN, JR.

President
University of South Carolina

"The University of South Carolina is proud of its continued work with the SmartState Program® and the innovative opportunities it provides our students. UofSC students develop their skillsets in our 26 SmartState Centers of Economic Excellence, such as the Cancer Drug Discovery and Innovation & Commercialization Centers. Our partnership with SmartState has revitalized our state's economic innovation and workforce development, and we are excited about the future promise of our students' professional readiness."

SmartState Collaboration with Students Furthers New Technology Applications in Prosthetic Limbs

Center for Multifunctional Materials & Structures works with Center for Innovation & Commercialization in collaboration with UofSC graduate students to advance commercialization of products

The University of South Carolina's Center for Multifunctional Materials & Structures is working with the Center for Innovation & Commercialization by bringing together a unique collaboration to advance prosthetic limb technology. The two Centers recruited two MBA students from UofSC's Darla Moore School of Business to collaborate on ways to commercialize their product among medical device companies.

Dr. Michel van Tooren, the SmartState Endowed Chair for MFMS has partnered with TIGHITCO's director of research and development, Arturs Bergs, and Dr. Laura B. Cardinal, the SmartState Endowed Chair for Innovation & Commercialization. The team works on aerospace manufacturing for TIGHITCO but also utilizes their 3-D additive printing to create prosthetic limbs for Extremiti3D, a prosthesis manufacturer.

The Challenge

"We're very excited about the potential of both the 3-D printing and prosthetics technologies," Bergs said. "But to move the technology forward, we have to understand market potential."

To assist in realizing the product's commercialization potential, Dr. van Tooren involved Dr. Cardinal and the UofSC MBA program students. Cardinal, who uses her SmartState Center to provide hands-on learning opportunities for MBA program students, recruited students, Elizabeth Haughton, a process engineer with Savannah River Nuclear Solutions in Aiken, and Will Coughlan, a sales manager for Metglas, Inc., in Conway, to conduct market research through an independent study project for course credit.

Haughton said the project enabled her to develop an entirely new skill set as a market analyst. "It was intense," Haughton said. "While most of our work was spent analyzing existing market research, industry reports and websites, we also interviewed people in the medical device industry. It really pushed us to not only learn new concepts and industries, but also how to apply UofSC and TIGHITCO's technology to the prosthetics market for Extremiti3D."

Coughlan said he was easily able to transfer his skillset in product management for Metglas to the SmartState prosthetics project, despite the two companies possessing differing technologies and being in different industries.

Haughton and Coughlan concluded their project with a formal presentation and recommendations. The stakeholders in the audience were impressed by Haughton and Coughlan's market validation and Extremiti3D later reported that the students validated many of the findings from their own internal market research.

The Opportunities

Bergs said, "Coughlan and Haughton not only provided new information, but they also provided industry contacts who may potentially lead us to the next stage in commercializing our technology." In continuing to leverage SmartState Centers, their endowed chairs and students in the Moore School and McNair Center, Dr. van Tooren sees great potential for future technologies.

"The purpose of applied science is to discover solutions to the issues facing society," Dr. van Tooren said. "The best way to do this is to bring industry into university research labs and classrooms, much like TIGHITCO has done in placing Bergs in my lab. This allows our scientists and students to focus on the industry-driven research and development companies can either no longer afford or prefer not to divert people and dollars away from commercial activities. SmartState endowed chairs, our people and labs fill this gap."



Translational Cancer Therapeutics Makes Significant Strides to Test Anti-Cancer Drug for Melanoma

SmartState Center connects with Chicago-based drug company, AbbVie, to advance melanoma drug study.

Former President Jimmy Carter's recent success in overcoming melanoma with immunotherapy treatments revealed the groundbreaking advancements that are happening in anti-cancer treatments. That is one of the many studies Kenneth Tew, Ph.D., D.Sc. at MUSC's Translational Cancer Therapeutics Center is working toward in his lab. Dr. Tew, the John C. West Endowed Chair in Cancer Research, and oversees the Redox Signaling Center of Biomedical Research Excellence (COBRE) grant now entering Phase III status at MUSC to trial and study the importance of melanin synthesis in malignant melanoma.

The Challenge

"Melanoma is one of the more common skin cancers in the world. Unfortunately, it is also one of the deadliest," explains Dr. Tew. "We know that malignant tumors possess eumelanin, a dark melanin pigment. The challenge is understanding how eumelanin is formed and those pathways that control its formation within a tumor."

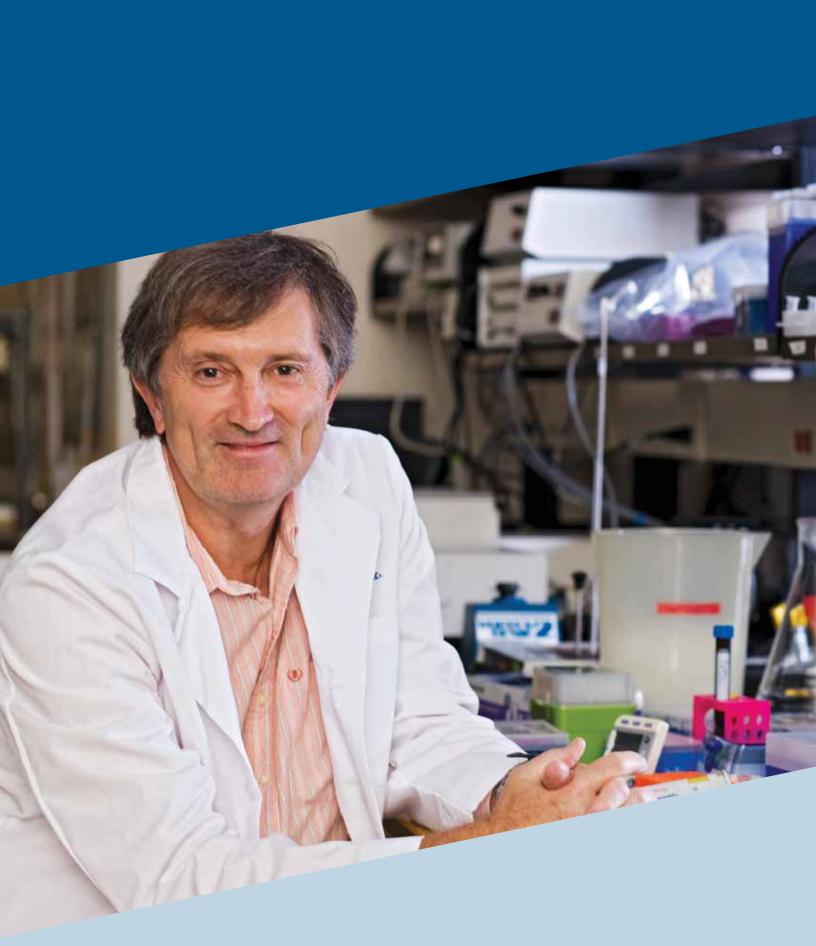
Dr. Tew works with Drs. Jie Zhang, Zhiwei Ye and Danyelle Townsend and have discovered that by genetically decreasing an enzyme protein, microsomal GST from melanoma cells, the tumor is depleted of melanin, turning from black to white.

Using CRISPR technology to achieve depleted mGST levels, Dr. Tew has found that either standard cancer chemotherapy drugs or immunotherapy is much more effective at controlling the disease.

The Opportunities

AbbVie is a Chicago-based pharmaceutical company. The connection that MUSC and Dr. Tew have to AbbVie comes into play with the mGST protein. AbbVie has conducted a series of drug discovery screens and identified small molecule compounds that can inhibit the mGST protein. Dr. Tew is in the early stages of developing a partnership with AbbVie to conduct testing of these possible drugs to target mGST. Such a partnership with AbbVie would, with the right preclinical results, lead to an opportunity to apply for an Investigational New Drug (IND) request for authorization from the FDA to administer and trial new drug treatment in humans.

"Ultimately, this means that more success stories like that of the former U.S. president could be achieved in larger populations of people," says Dr. Tew. "We're extremely positive about the advancement of these efforts and the collaboration MUSC could have with a large pharmaceutical company like AbbVie."



Vehicle Electronic Systems Integration Awarded Phase II of National Science Foundation Grant for ROSEHUB Center

ROSEHUB Center overcomes pandemic challenges and is actively seeking membership to develop intelligent application research.

Clemson University's Vehicle Electronic Systems Integration SmartState Center has embarked on an exciting consortium that consists of companies and universities who work together to develop research around intelligent systems technology. Thanks to a recent National Science Foundation (NSF) award, Venkat Krovi, Ph.D., FASME, who is the Michelin Endowed Chair of Vehicle Automation, and his team at the Center have begun Phase II activities of the RObots and SEnsors for HUman Well-Being (ROSEHUB) I/UCRC Center.

The ROSEHUB Center is focused on robotic, sensor and actuation technologies that enhance automation and quality of life, work and/or health – all core Industry 4.0 topics of enormous interest to our growing SC industrial base. It is the only Industry-University Cooperative Research Center (IUCRC) in robotics and intelligent systems technology. Together with the other national sites (University of Minnesota, University of Pennsylvania, Worcester Polytechnic University), Clemson will pursue robotics deployments spanning the areas of automated logistics, medical, health, agriculture, transportation, environmental, and many other industrial fields.

The Challenge

"The pandemic has certainly challenged us with unforeseen circumstances," says Dr. Krovi. "We were awarded Phase II of this grant in March 2020, right as the COVID-19 pandemic hit the U.S. During a time when we would be actively recruiting for business partnerships with the ROSEHUB Center, we were faced with shutdowns and economic upheaval."

Dr. Krovi said he and his team have overcome these challenges by collaborating with South Carolina Research Authority (Catherine Hayes) and SC Fraunhofer (Suzanne Dickerson) to highlight and communicate the value proposition ROSEHUB to investors and businesses.

The Opportunities

"We're very excited to be a part of this cutting-edge research consortium," says Dr. Krovi. "All of our research in robots and sensors is for the advancement of human well-being. The breadth and depth of our cross-disciplinary expertise allows for cross-pollination of the knowledge and benefits across many different industries." As one of many examples: the mature research of University of Minnesota for automated vision-based truck-tracking is now ready for evaluation for truck marshalling in BMW or SC Port Authority logistics yards.

Dr. Krovi says the benefits of membership into the consortium are three-fold: it allows tremendous access to the network of research universities and their student talent-base and; NSF mandates a 10% overhead rate for industry-memberships (a 40% reduction from traditional university overhead rates); and finally, it allows for shared researchinsights in an emerging Industry 4.0 topics across four different universities around the country.

The ROSEHUB Center is actively seeking membership from businesses. The ROSEHUB Center offers industry solutions to problems such as logistics. ROSEHUB allows for intensive analytical solutions and connectivity to a national network of researchers.

"We feel positive about the future of ROSEHUB and the benefits it offers its partners," says Dr. Krovi. "We look forward to offering tailored industry solutions and bringing about better quality of life for all."



The Economic Impact of the SmartState Program®

The primary mission of the SmartState Program* is to generate high-skilled, highwage jobs in South Carolina as part of the knowledge economy. SmartState's established research centers help to expand the state's knowledge base by creating public-private partnerships, supporting startup firms, and helping to retain highly skilled workers. Each of these efforts results in the creation of jobs that are among the highest paid of all industries in South Carolina.

Over the last two decades, regions with the highest rates of economic growth have typically had larger shares of their workforce employed in the knowledge economy. The skills associated with these jobs often include more advanced training in the fields of mathematics and science, complex problem solving, and creative and technological innovation. The commercialization of these ideas leads to economic growth and significant knowledge spillover effects.

As of 2020, the SmartState Program® is responsible for helping to create and support approximately 15,842 jobs in South Carolina, which is associated with over \$3.2 billion in economic activity and \$929 million in labor income for South Carolinians that would not exist otherwise. Approximately 6,046 (38%) of these positions are knowledge economy jobs created directly through the SmartState Program®, with the remaining 9,796 (62%) arising from additional spending activity generated through the economic multiplier effect.

The specific employment multiplier associated with these estimates is 2.6 - for every 10 knowledge

economy jobs directly created through the SmartState Program*, an additional 16 jobs are created elsewhere in South Carolina. This multiplier effect is larger than the state average - that is - each new job created through the SmartState Program* increases total South Carolina employment by more than it would if that job had been created in another industry of comparable size.

The average annual salary associated with a SmartState job in the knowledge economy is \$76,745. This is roughly 71 percent higher than the average annual salary among all jobs in South Carolina. When examining the salaries of all jobs associated with the SmartState Program* - including those created through the economic multiplier effect - the average annual salary is estimated to be \$58,673. This dollar amount is approximately 30 percent higher than the average annual salary among all South Carolina jobs.

The ongoing growth of the knowledge economy that supports innovation and commercial development will be a key component of South Carolina's economic recovery following the COVID-19 pandemic and the 2020 recession. The SmartState Program® creates and supports program centers designed specifically to encourage this growth through investments in research and development, startup companies, company recruitment, and retaining talented alumni. Ultimately, it is an ongoing expansion of the knowledge economy that will create additional high-wage, highskilled jobs for South Carolinians and the SmartState Program® has clearly become a state leader in these efforts across the state.



"Like many other regions across the United States, South Carolina has been hit hard by the pandemicinduced recession of 2020, with nearly 276,000 jobs lost across all industry sectors during the height of the COVID-19 shutdown. As the state now looks toward economic recovery efforts, it is important to recognize that the fastest growing regions in the United States throughout the 21st century have been those with a strong and vibrant knowledge economy. The SmartState Program® plays a pivotal role in sustaining the ongoing development of the knowledge economy in the Palmetto State, and since 2002, has generated nearly 16,000 jobs with annual salaries that pay significantly above the state average."

Dr. Joseph Von Nessen, Research Economist Moore School of Business, University of South Carolina

SmartState Program® By The Numbers



- 1 Industry-focused research is conducted in six areas of global importance: Advanced Materials and Nanotechnology, Automotive and Transportation, Biomedical, Energy, Information Science, and Pharmaceutical.
- 2 Includes \$180 million from the State Education Lottery appropriations and \$17.6 million accrued interest from SmartState Program® endowment.
- 3 The figures reported are from the November 2020 Economic Impact of the SmartState Program® analysis conducted by the Darla Moore School of Business. Of the total 15,842 jobs, 6,046 are knowledge economy jobs created directly through the SmartState Program®, including 735 SmartState personnel, 1,213 start-up company and corporate relocation personnel, 34 alumni, and 4,098 employed through Extramural Research Funding. The remaining 9,796 jobs are indirect employment arising from the economic multiplier effect.
- 4 See page 15 for a listing of investors, start-ups and corporate relocations.

Investors, Start-ups, and Corporate Relocations in South Carolina

CORPORATE AND ORGANIZATIONAL INVESTORS

More than three dozen companies have invested \$500,000 or more in the Smart State Program®.

- Abney Foundation
- BASF
- Bank of America Foundation
- Biomass Gas & Electric
- BlueCross BlueShield Foundation
- BMW
- Comporium Group
- Daniel Island Company
- Dialysis Clinics, Inc.
- **Duke Energy**
- Duke Energy Foundation
- Electric Cooperatives of South Carolina
- Fluor Corporation
- Force Protection Industries
- G. E. Renewable
- General Atomics
- George B. Sibert Annuity
- GlaxoSmithKline
- Greenville Hospital System
- Health Sciences South Carolina
- J.E. Sirrine Foundation
- Kellogg Foundation
- Kentwool
- Michelin Okuma
- Orbis
- Palmetto Health
- **PalmettoNet**
- Research to Prevent Blindness
- Robert Wood Johnson Foundation
- Samuel Freeman / Donaldson Charitable Trust
- Santee Cooper
- Smith & Nephew
- Spartanburg Regional
- SRNL Healthcare System
- The Duke Endowment
- The Spaulding Paolozzi Foundation
- Timken
- Toyota
- Volvo
- Westinghouse

START-UP **COMPANIES**

Start-up companies founded as a result of research at UofSC, MUSC, and Clemson University:

- Career Care Solutions
- Cephos
- Cicadia
- Clinacuity
- Closing the Gap in Healthcare, Inc.
- Coastal Focus Market Research Company
- DF Werke, LLC
- Doxy.me
- eCAM
- ENCI Therapeutics and NeuroEpiginex, LLC
- FibroBiologics, LLC
- Fibro Therapeutics, Inc.
- First String Research
- GeoMat, LLC
- Glycopth, LLC
- Hydrogen Hybrid Mobility, LLC
- ImmoMod, Inc.
- Indepth Pharmeceuticals
- Inquisatex Epitherapeutics, LLC
- IntrusinMyFamily.com
- MagAssemble, LLC
- MicroVide
- MitoChem Therapeutics, LLC
- MitoHealth, Inc.
- Neuroene Therapeutics
- NextGenEn
- NXT
- **Oncology Analytics**
- Palmetto Fuel Cell Technologies, LLC
- Palmetto Green
- Parallel Permeation, Inc.
- Patient Guided Health Solutions, LLC
- Perfect Mixing, LLC
- Protara, LLC
- SAGE Energy Solutions
- Schnellgen, Inc.
- SemiAllogen, Inc
- SimTunes, LLC
- Smart Innovations, LLC
- South Carolina Science Solutions, LLC
- Specialty & Custom Fibers, Inc.
- Sycamore Biopharm, LLC
- Tetramer Technologies
- Vortex Biotechnology Corporation
- Zeriscope, Inc

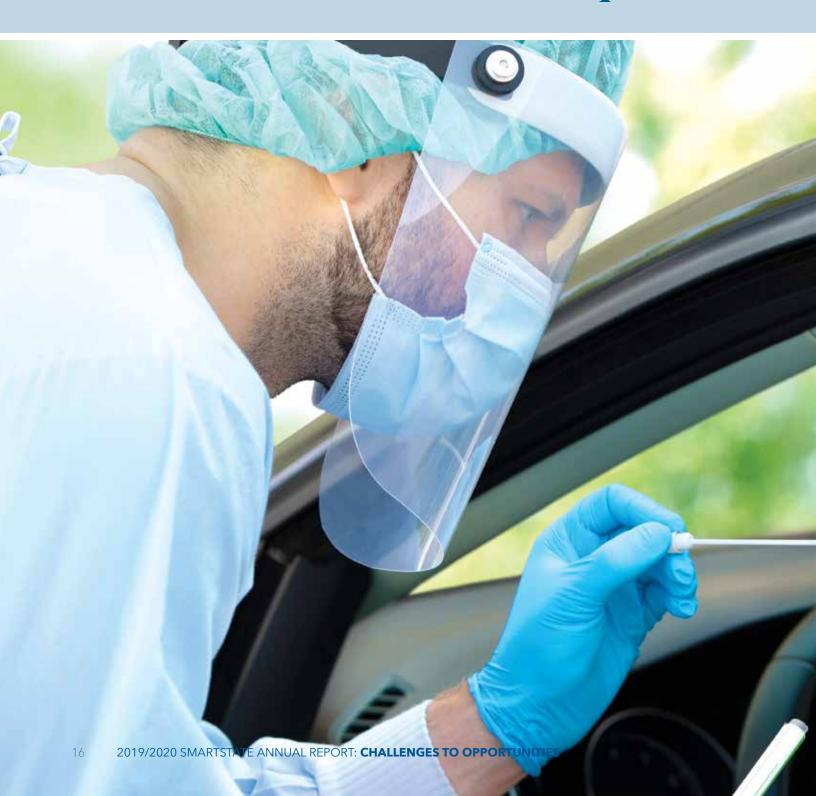
CORPORATE RELOCATIONS

Companies that have relocated to South Carolina to benefit from the expertise, resources, and graduates in the SmartState Program®:

- A. Berger
- American Titanium Works (ATW) Manufacturing
- American Titanium Works (ATW) Technology Center
- BMW Information Technology Research Center (ITRC)
- CADFEM U.S.*
- CECAS
- Charge2Target
- CGF
- CleanEnergy
- Computech*
- Cooliemon Technologies*
- C-P-S Group
- CU Corp Foundations
- DreamWeaver*
- EHD Tech
- Environment and Health Inc. (EHG)
- Esys Automation
- Fields Group, LLC.*
- Focus Chemicals*
- Formel D
- FSI Advanced Research
- Greenway Energy, LLC
- Innoventure
- IndySoft
- Intec U.S. Inc.
- Intellectual Capital Group
- International Mold Co.
- JTEKT Technology Center
- Mallet Technology*
- Michelin
- Michelin Incubator
- MTC Federal Credit Union
- Mumford Industries*
- OmniSource
- Parkway Products
- People Link
- Proterra, Inc.
- RESA (AIG-Clemson)
- Roding*
- Sage Automotive Interiors*
- SC Manufacturing Alliance
- SC Research Authority (SCRA)
- Senex Biotechonology, Inc.
- Simpack, Inc. SMT
- SWJ Breilman
- ThermoPur Technologies*
- TR Fastenings
- Tigges* Tenin Holding Toho Tenax*

^{*} In May 2012, CU-ICAR (Clemson University International Center for Automotive Research) opened the doors to the Center for Emerging Technologies (CET) facility, its first multitenant building. CET provides office, administrative, and laboratory space for transportation, technology, and energy sectors. These companies have positioned themselves on the CU-ICAR campus to be close to the SmartState Endowed Chairs and their research teams.

SC SmartState Centers on the Frontline of COVID-19 Response



From challenges to opportunities:

Pandemic brings about statewide collaborations with hospital systems, universities, and communities for a stronger SC.



SC SmartState Centers on the Frontline of COVID-19 Response

The Center for Translational Cancer Therapeutics at the University of South Carolina

Igor Roninson, PhD, the Endowed Chair in Translational Cancer Therapeutics at the University of South Carolina (UofSC), was recently awarded his second \$11.2 million grant from the National Institutes of Health (NIH) to support the COBRE Center for Targeted Therapeutics. The Center supports the development of molecularly targeted drugs for the treatment of different diseases—which now include the Coronavirus (COVID-19).

"In late March, it became clear that our state was not yet ready to carry out massive COVID-19 testing," says Dr. Roninson. "Our Center could provide the special equipment and the expertise to conduct the testing. It was only natural that our Center's team stopped what we were doing and got all hands-on-deck to help navigate a solution for South Carolina."

Dr. Roninson' COBRE Center's team, led by Dr. Michael Shtutman, Director of the Center's Functional Genomics Core, who was recruited to UofSC under Dr. Roninson's SmartState package, collaborated with PRISMA Health to test their personnel for COVID-19 and developed the procedures for testing UofSC students and faculty. This testing is now conducted by the accredited testing lab, based at UofSC College of Pharmacy. In particular, they developed the saliva test currently being utilized by UofSC and many other rapid response outlets across the state. Using volunteer labor of faculty and staff, the COBRE Center and the CLIA lab created standard testing procedures for the university, and have since conducted more than twenty thousand COVID-19 tests. Additionally, Dr. Shtutman is working on virus sequencing and tracing, an important aspect to controlling the spread. "In South Carolina, testing has been a critical part in keeping our state and university safe", says Dr. Roninson.

With the onset of the pandemic, the COBRE Center has also called for UofSC scientists to propose innovative strategies for the treatment of COVID-19 patients and funded three COVID-19 drug discovery projects. These ongoing studies are aimed at generating systems for testing drugs without having to come in direct contact with the virus and at developing new drugs to fight both the virus itself and the virus-induced inflammation, which is the key cause of severity of COVID-19 infection.

"The fight against novel viruses and other infectious diseases is now a major priority," says Dr. Roninson. "Our Center will support creating a faculty position in virology and a long-term research program to stay ahead of outbreaks such as these."

Health Facilities Design & Testing at the Medical University of South Carolina

Dr. Kenneth Catchpole is the SmartState Endowed Chair in Clinical Practice and Human Factors in the Health Facilities Design & Testing SmartState Center. Over the last eight months, Dr. Catchpole and his team have assisted COVID-19 efforts in:

- Developing personal protective equipment (PPE) protocols and training materials
- Create easy-to-use patient proning and ventilator protocols for those not used to working in the ICU
- Delivered briefings and handover tools specific to COVID-19
- Evaluated remote ICU monitoring system for austere COVID-care environments

Additionally, Dr. Catchpole's team assessed what we can learn from teamwork on COVID-19 response units. Specifically, they assessed how quick responses from bioengineering and supply chain enhanced teamwork and COVID response units. They also discovered how COVID response units benefit from organizational support for 'bottom up' changing of work processes, rather than traditional 'top down.'



SC SmartState Centers on the Frontline of COVID-19 Response

Clinical Effectiveness and Patient Safety and Translational Bioinformatic Center at the Medical University of South Carolina

Jihad Obeid, MD, FAMIA, the Endowed Chair in Biomedical Informatics at the Clinical Effectiveness and Patient Safety Center of Economic Excellence and Stephane Meystre, MD, PhD, FACMI, MUSC Endowed Chair in Translational Biomedical Informatics, have both been working closely in the National COVID Cohort Collaborative (N3C).

One of several projects that MUSC participates in with this collaborative is data sharing for COVID-19. Dr. Obeid has been a key player in initiating the MUSC involvement in the National COVID Cohort Collaborative (N3C).

In an effort to improve the efficiency of computer algorithms applied to screening for coronavirus disease 2019 (COVID-19) testing, Dr. Obeid's and Dr. Meystre's team used natural language processing and artificial intelligence-based methods with unstructured patient data collected through telehealth visits.

After segmenting documents, they conducted analysis of overrepresented words in patient symptoms. We then developed a word embedding-based convolutional neural network for predicting COVID-19 test results based on patients' self-reported symptoms.

Text analytics revealed that concepts such as smell and taste were more prevalent than expected in patients testing positive. As a result, screening algorithms were adapted to include these symptoms. The deep learning model yielded an area under the receiver-operating characteristic curve of 0.729 for predicting positive results and was subsequently applied to prioritize testing appointment scheduling.

Informatics tools such as natural language processing and artificial intelligence methods can have significant clinical impacts when applied to data streams early in the development of clinical systems for outbreak response.

Dr. Meystre and Dr. Obeid have also made major headway in the area of data collection for COVID studies. Recently, N3C created a centralized national registry of patients who have been tested or treated for COVID-19. Participating hospitals provide COVID-19 patient data twice weekly to keep the registry current. The South Carolina Clinical and Translational Research (SCTR) Institute was among the first five hubs to sign on to N3C, and MUSC has already begun sharing its data.

Dr. Meystre is the principal investigator of N3C for the MUSC site. "A national database makes it possible to have a much larger number of patients and represent the different ways the pandemic is evolving in different regions and populations," says Dr. Meystre.

Beyond tracking the evolution of the pandemic, the national registry will help researchers to study some of the rarer complications of COVID-19, according to Dr. Meystre. Researchers could use the registry, for instance, to identify enough pediatric patients who were diagnosed with multisystem inflammatory syndrome in children (MIS-C), which can result from COVID-19, to begin to understand and treat that disease better. Perhaps most exciting of all, the enormous dataset will enable artificial intelligence to unravel some of COVID-19's mysteries.



SMARTSTATE PROGRAM® Centers and Endowed Chairs

The work of South Carolina's SmartState Centers is exciting, groundbreaking, and of critical importance to the state, nation and world. These Centers, which align with industries in South Carolina, help elevate the state's economy and quality of life. What follows is an overview of each Center.

Program totals reported as of November 2020. In cases of joint proposals, Centers awarded by an institution are tallied by the fiscal agent. Endowed chairs are tallied based on the assigned institution. UofSC's assigned endowed chairs include one joint appointment with MUSC and Clemson. On the pages that follow, information about each SmartState Center includes the date the center was approved, the institution(s) awarded, the state award amount that must be

matched with an equal amount of non-state investment, the appointed endowed chair(s) as of November 2020, reported extramural research funding (federal and private awards) above the match, and a brief description of the research focus. Centers are grouped by industry cluster. For updated information on centers and program totals, contact the S.C. Commission on Higher Education or visit **SmartStateSC.org**.

- **51** SmartState Program® Centers Awarded
- **86** SmartState Endowed Chairs Created
- 74 SmartState Endowed Chairs Appointed
- 12 SmartState Endowed Chairs Remaining to be Appointed



13	Awarded
16	Created
16	Appointed
00	Remaining



18	Awarded
28	Created
22	Appointed
06	Remaining



20	Awarded
42	Created
36	Appointed
06	Remaining



Advanced Materials & Nanotechnology

ADVANCED FIBER-BASED MATERIALS*

Award Date: 2006

State Award Amount: \$4 million

University: Clemson

Endowed Chair(s):

Dr. Marek Urban

J.E. Sirrine Foundation Endowed Chair in Advanced Fiber-Based Materials

Corporate Partner(s):

J.E. Sirrine Textile Foundation

External Funding Above Match:

\$15.5 million

Research Focus: To provide the vehicle for repositioning existing research and manufacturing resources to support new industrial and entrepreneurial opportunities based on advanced polymeric-based materials.

ENVIRONMENTAL NANOSCIENCE AND RISK*

Award Date: 2008

State Award Amount: \$3 million

University: UofSC

Endowed Chair(s):

Dr. Jamie Lead

External Funding Above Match:

\$5.9 million

Research Focus: Understand thefundamental properties of nanomaterials and nanomaterials-environment interaction and use these principles to understand and help reduce impacts of nanomaterials used as well as develop and innovate nanotechnological applications.

EXPERIMENTAL NANOSCALE PHYSICS*

Award Date: 2003

State Award Amount: \$4 million

University: UofSC

Endowed Chair(s):

UofSC is recruiting one endowed

External Funding Above Match:

\$6.3 million

Research Focus: Perform basic and applied research of potential spintronic optoelectronic and nanoelectronic devices and/or materials for future applications in information processing, high-speed, highdensity electronics, and bio, chemical and radiation sensing.

MULTIFUNCTIONAL MATERIALS & STRUCTURES (MFMS)*

Award Date: 2013

State Award Amount: \$2 million

University: UofSC

Endowed Chair(s):

Multifunctional Materials is recruiting one endowed chair.

External Funding Above Match:

\$13.4 million

Research Focus: The development and supply of engineered materials for high technology industries such as aerospace by providing a foundation of research and development that will enable and enhance growth in theengineered materials field. Specific examples of research and development include: Lightning strike and EMF management, structural integrity, energy storage, essential power for commercial aircraft, and multiphysics-based micro/nano mechanics of dielectric materials.

OPTICAL MATERIALS/PHOTONICS*

Award Date: 2004

State Award Amount: \$5 million

University: Clemson

Endowed Chair(s):

Dr. John Ballato

J. E. Sirrine Textile Foundation Endowed Chair in Optical Fiber

Corporate Partner(s):

J.E. Sirrine Textile Foundation

External Funding Above Match

\$35 million

Research Focus: Conduct optical and photonic materials research, particularly as relates to advanced optical fibers and fiber-based devices, and recruit and mentor graduate students with a focus on domestic scholars. Identify and foster the latest technologies and initiate partnerships with top national research universities and laboratories, aid South Carolina industry and economic development partners in the transfer of technology from Clemson to the public sector, and participate in the recruitment of optical technology firms to South Carolina.

POLYMER NANOCOMPOSITES*

Award Date: 2004

State Award Amount: \$3.5 million

University: UofSC

Endowed Chair(s):

Dr. Brian Benicewicz

Materials Science & Engineering

Corporate Partner(s):

Michelin North American, BASF, U.S. Navy, PBI Performance Products

External Funding Above Match:

\$18.5 million

Research Focus: Development of synthetic tools needed to precisely control the environment or interface between nanoparticles and polymer matrix applicable to optics, electronics, biological, medical, and structural material applications.

*Graduated Center

Once a center has reached a point of full operability, the SmartState Review Board has the authority to graduate SmartState centers. A center must meet the requirements in the following key areas to be considered graduated: non-state match; all draw downs; endowed chairs and key personnel; initiatory programmatic activities have been achieved; the most recent annual report cites demonstrable programmatic activity; and match certification. Once a center is graduated, the majority of fiscal and administrative oversight responsibilities are transferred to the center's lead fiscal institution. Certain accountability and reporting obligations are retained by the graduated center.

Automotive & Transportation

AUTOMOTIVE DESIGN AND DEVELOPMENT*

Award Date: 2004

State Award Amount: \$5 million

University: Clemson

Endowed Chair(s):

Dr. Zoran Filipi

Timken Endowed Chair in Vehicle System Design and Development

Corporate Partner(s):

Hertz Corporation, Duke Energy

External Funding Above Match:

\$14 million

Research Focus: Focuses on the research and design of advanced powertrains for internal combustion engines and hybrid and electric vehicles, along with lightweight design and materials, functional integration and structural dynamics for vehicles.

AUTOMOTIVE MANUFACTURING*

Award Date: 2003

State Award Amount: \$5 million

University: Clemson

Endowed Chair(s):

Dr. Laine Mears

BMW Endowed Chair in Automotive

Manufacturing

Corporate Partner(s):

BMW

External Funding Above Match:

\$17.2 million

Research Focus: Seeks to reinvent thevehicle production system through developing processes inspired by car designs (transitioning from Design-for-Manufacturing thinking to Manufacturing for-Design), and augmenting existing process capital through smarter modelbased control and applying energy fields to overcome material limitations. The guiding goals of this research are to improve productivity, reduce downtime, enhance quality, and more effectively integrate the human to the emerging digital information network.

AUTOMOTIVE SYSTEMS INTEGRATION*

Award Date: 2003

State Award Amount: \$5 million

University: Clemson

Endowed Chair(s):

Dr. Chris Paredis, Clemson BMW Endowed Chair in Automotive Systems Integration

Corporate Partner(s):

BMW, Mazda, GM and others

External Funding Above Match:

\$9.5 million

Research Focus: Automotive diagnostics and prognostics, sustainable mobility, concepts, methods and tools. Deriving a simple, flexible energy management control strategy for plug-in hybrid electric vehicles.

SUPPLY CHAIN OPTIMIZATION AND LOGISTICS*

Award Date: 2006

State Award Amount: \$2 million

University: Clemson

Endowed Chair(s):

Dr. Scott Mason

Fluor Endowed Chair in Supply Chain Optimization & Logistics

Corporate Partner(s):

Fluor

External Funding Above Match:

\$16.3 million

Research Focus: Interdisciplinary research addressing the multifaceted problems associated with supply chains. Deliver tangible supply chain optimization and logistics products and services through theoretical and applied research.

VEHICLE ELECTRONIC SYSTEMS INTEGRATION*

Award Date: 2004

State Award Amount: \$3 million

University: Clemson

Endowed Chair(s):

Dr. Venkat Krovi

Michelin Endowed Chair in Vehicle Electronic Systems Integration

Corporate Partner(s):

Michelin

External Funding Above Match:

\$5.8 million

Research Focus: Research to enable intravehicle and V2X automation, at subsystem, system, and system-of-systems levels, for automotive and vehicular applications.



ADVANCED TISSUE BIOFABRICATION

Award Date: 2008

State Award Amount: \$5 million

Universities: MUSC, UofSC, Clemson

Endowed Chair(s):

Dr. Bruce Gao, Clemson Endowed Chair in Biofabrication Engineering

Dr. Henry Sucov, MUSC Endowed Chair in Biofabrication Biology

UofSC is recruiting an Endowed Chair in Biofabrication Engineering

External Funding Above Match: \$672,993

Research Focus: Develop innovative technologies and approaches that will enable repair, replacement, or restoration of diseased cells, tissues and organs.

BRAIN IMAGING*

Award Date: 2003

State Award Amount: \$5 million

Universities: UofSC, MUSC

Endowed Chair(s):

Dr. Chris Rorden, UofSC Endowed Chair in Neuroimaging

Dr. Hesheng Liu, MUSC
Endowed Chair in Imaging Science

Dr. Leonardo Bonilha, MUSC Endowed Chair in Brain Imaging

External Funding Above Match:

\$52.1 million

Research Focus: Creating a worldclass brain imaging center. Initiated the first study using transcranial magnetic stimulation (TMS). Combined with functional MRI, TMS provides a short strong magnetic field useful for studying how the brain works. Specific studies include stroke-related brain injury and MRI physics techniques for clinical and neuroscience research.

CHILDHOOD NEUROTHERAPEUTICS*

Award Date: 2006

State Award Amount: \$5 million

Universities: UofSC, MUSC

Endowed Chair(s):

Dr. Jeffery Twiss, UofSC Child and Adolescent Neurochemistry

Dr. Manuel Casanova, UofSC Translational Clinical Research

Dr. Bobby Thomas, MUSC Neurodevelopmental Disorders

Childhood Neurotherapeutics is recruiting one UofSC endowed chair

External Funding Above Match:

\$13.8 million

Research Focus: Prevention of brain damage in premature infants and curing infant brain diseases through cellular engineering. Also, working on cognitive behavioral tasks in transgenic mice to determine if therapeutics can improve functional development outcomes, which may someday help children with ADHD.

CLINICAL EFFECTIVENESS AND PATIENT SAFETY*

Award Date: 2006

State Award Amount: \$5 million

Universities: UofSC, MUSC

Endowed Chair(s):

Dr. John Schaefer, MUSC Lewis Blackman Endowed Chair for Patient Simulation & Research for Health Sciences South Carolina

Dr. Jihad Obeid, MUSC Biomedical Informatics

Dr. Cynthia Corbett, UofSC Endowed Chair in Chronic Care Management

External Funding Above Match:

\$12.9 million

Research Focus: Quality and safety of patient care, and improving the medical informatics aspects of data acquisition and the evaluation of health information technology on the quality and safety of clinical care processes and outcomes. The Center also focuses on developing South Carolina as a training center for physicians and other health professions using human simulators and sophisticated software-based training scenarios.

EFFECTIVENESS RESEARCH IN ORTHOPEDICS (CERotho)

Award Date: 2007

State Award Amount: \$5 million

University: UofSC

Endowed Chair(s):

Dr. John Brooks

Corporate Partner(s):

Smith & Nephew

External Funding Above Match: \$17.3 million

Research Focus: Medical health needs in orthopaedic disorders, exercise and sportsrelated injury prevention, treatment, and rehabilitation. The Center investigates the biologics of tissue-engineered materials and implantable devices to find solutions to musculoskeletal maladies.



BIOMARINE ENVIRONMENTAL AND COASTAL HEALTH PROGRAM (BEACH)

Award Date: 2003

State Award Amount: \$4 million

Universities: MUSC, College of

Charleston

Endowed Chair(s):

Dr. Gavin Naylor, MUSC

Environmental Health Panomics

Dr. Michael G. Janech, MUSC Marine Environmental Biology

External Funding Above Match:

\$12 million

Research Focus: Monitoring and predicting the impact of environmental changes on marine biosystems, which can, in turn, affect human health. Specific areas of study include environmental causation in wildlife, human disease and susceptibility, and mapping variability in genomes and populations; as well as research of shark and ray species.

HEALTHCARE QUALITY*

Award Date: 2007

State Award Amount: \$5 million

Universities: MUSC, UofSC

Endowed Chair(s):

Dr. Les Lenert, MUSC *Medical Bioinformatics*

Dr. Xiaoming Li, UofSC Translational Clinical Research

Corporate Partner(s):

The Duke Endowment

External Funding Above Match:

\$33.5 million

Research Focus: Creating a unique and comprehensive clinical data store that collects data from providers, enhances data usability, and makes it available in an easily accessible form for participants to use for clinical improvement and research purposes.

HEALTH FACILITIES DESIGN AND TESTING

Award Date: 2007

State Award Amount: \$2 million

Universities: Clemson, MUSC

Endowed Chair(s):

Dr. Anjali Joseph, Clemson Architecture & Health Research

Dr. Kenneth Catchpole, MUSC Clinical Practice and Human Factors

External Funding Above Match:

\$6.3 million

Research Focus: The impact of the built environment on health and healthcare delivery and the creation of architectural settings that promote health, safety, and the wellbeing of all users.

INFLAMMATION AND FIBROSIS RESEARCH*

Award Date: 2010

State Award Amount: \$5 million

University: MUSC

Endowed Chair(s):

Dr. Carol Feghali-Bostwick Kitty Trask Holt Endowed Chair for Scleroderma Diseases

Dr. Betty Tsao Inflammation Research

External Funding Above Match:

\$48.3 million

Research Focus: Develop new therapies and education programs for inflammatory and fibrosing rheumatic diseases such as lupus, scleroderma, and rheumatoid arthritis.

MOLECULAR PROTEOMICS IN CARDIOVASCULAR DISEASE AND PREVENTION*

Award Date: 2006

State Award Amount: \$5 million

University: MUSC

Endowed Chair(s):

Dr. Sheldon E. Litwin

Countess Alicia Spaulding Palozzi Chair in Cardiovascular Imaging

Dr. Thomas G. DiSalvo

Volpe SmartState Endowed Chair in Cardiovascular Biomarker Development for Diagnosis & Prevention

External Funding Above Match

\$8.6 million

Research Focus: Translation advances in basic bench science to clinical bedside care to improve the health care of the citizens of South Carolina. Priorities include diagnostic techniques, therapeutic management strategies, relations of protein signatures to clinical outcomes for risk assessment, and treatment of disease manifestation.

NEUROSCIENCES

Award Date: 2003

State Award Amount: \$3 million

University: MUSC

Endowed Chair(s):

Dr. Christopher Cowan William E. Murray Endowed Chair in Neuroscience

Dr. Vanessa Hinson Josephine Tucker Morse Endowed Chair in Parkinson's Disease

Dr. Gonzalo Revuelta Endowed Chair in Neurogenerative Diseases

External Funding Above Match

\$20.8 million

Research Focus: Brain neuromodulatory systems and their roles in cognitive performance, drug abuse, sleep and affective disorders. Other areas of research are movement disorders such as Ataxia, Choro, Bradykinesia and multiple system atrophy.



PROSTATE CANCER DISPARITIES

Award Date: 2008

State Award Amount: \$3.6 million

Universities: MUSC, UofSC, SCSU

Endowed Chair(s):

Dr. Chanita Hughes-Halbert, MUSC AT&T Distinguished Endowed Chair in Cancer Equity in Cancer Disparities

Dr. Marvella Ford, MUSC/SCSU Cancer Disparities

UofSC is recruiting one endowed chair in Cancer Disparities.

Corporate Partner(s): AT&T

Foundation

External Funding Above Match:

\$52.7 million

Research Focus: Facilitate statewide partnerships in cancer prevention and control research, clinical trials, and training to significantly decrease disparities in prostate cancer incidence and mortality in South Carolina.

PROTEOMICS*

Award Date: 2003

State Award Amount: \$4 million

University: MUSC

Endowed Chair(s):

Dr. Richard Drake
Endowed Chair in Proteomics

Dr. Anand S. Mehta

Endowed Chair in Proteomic Biomarkers

External Funding Above Match:

\$25.1 million

Research Focus: Develop and use high-end analytical technologies to understand the biologic profile of protein expression in health and disease. Developing enzymebased analytical methods to effectively detect biomolecules in tissues and tissue microarray platforms.

REGENERATIVE MEDICINE*

Award Date: 2004

State Award Amount: \$5 million

Universities: MUSC, UofSC, Clemson

Endowed Chair(s):

Dr. Martin Morad, UofSC BlueCross BlueShield of SC Foundation Chair in Cardiovascular Health

Dr. Stephen Duncan, MUSC Regenerative Medicine and Cell Biology

Dr. Jeremy Gilbert, Clemson Hansjörg Wyss Endowed Chair in Bioengineering

External Funding Above Match:

\$45.3 million

Research Focus: Regenerative medicine approach for cardiovascular applications and provide expertise in clinical trials, statistics and/or assay development. Application of regenerative medicine and tissue engineering approaches to orthopaedic and neural diseases. Regeneration of tissue and organs for repairing, replacing, and maintaining organ function.

RENAL DISEASE BIOMARKERS

Award Date: 2008

State Award Amount: \$5 million

University: MUSC

Endowed Chair(s):

Dr. Deepak Nihalani Renal Biomarkers

Newton C. Brackett, Jr. MD Endowed chair in Translational Nephrology Research.

External Funding Above Match:

\$8.2 million

Research Focus: Identifying biomarkers that identify or predict prognosis for acute kidney injury, diabetic neuropathy, lupus nephritis, and focal segmental alomerulosclerosis.

SENIORSMART®

Award Date: 2007

State Award Amount: \$5 million

Universities: UofSC, Clemson

Endowed Chair(s):

Dr. Sue Levkoff, UofSC SmartHOME®

Dr. Julius Fridriksson, UofSC SmartBRAIN™

Dr. Lesley Ross

Endowed chair in Aging and Cognition

External Funding Above Match

\$17 million

Research Focus: Three areas of research include: SmartBRAIN™ (maintaining intellectual activity), SmartWHEELS™ (independent mobility outside the home) and SmartHOME® (independent mobility inside the home) to foster independent living among seniors.



STROKE*

Award Date: 2007

State Award Amount: \$5 million

Universities: MUSC, UofSC

Endowed Chair(s):

Dr. Mark Chimowitz, MUSC Countess Alicia Paolozzi Endowed Chair in Translational Neurology

Dr. Souvik Sen, UofSC Clinical Neurology

External Funding Above Match:

\$31.6 million

Research Focus: Enhancing stroke treatment, prevention, and recovery. This Center is developing new stroke-related therapeutics, drug discovery, and biotechnology, and is a leader in stroke telemedicine.

TECHNOLOGY CENTER TO ENHANCE HEALTHFUL LIFESTYLES*

Award Date: 2009

State Award Amount: \$3 million

Universities: MUSC, UofSC

Endowed Chair(s):

Dr. Kenneth Ruggiero, MUSC Technology Applications for Disease Prevention, Management, and Risk Reduction

Dr. Delia West, UofSC
Technology Application for Health Behavior

External Funding Above Match:

\$18.5 million

Research Focus: Develop and test lifestyle interventions for improving health, preventing illness and managing chronic health problems caused by physical inactivity, poor diets, and other lifestyle behaviors.

TOBACCO-RELATED MALIGNANCY

Award Date: 2007

State Award Amount: \$5 million

University: MUSC

Endowed Chair(s):

Dr. Nancy DeMore BMW Chair in Cancer Research

Dr. John Wrangle, MUSC The Burtschy Family Distinguished Endowed Chair in Lung Cancer Research.

Corporate Partner(s):

BMW

External Funding Above Match:

\$77.8 million

Research Focus: Devoted to discovering tobacco-related malignancy biomarkers via clinical trials with a specific focus on tobacco-related cancers. Additionally, the Center is evaluating the specificity and sensitivity of novel biomarkers by molecular epidemiologic techniques across the diverse populations of South Carolina.

TRANSLATIONAL BIOMEDICAL INFORMATICS

Award Date: 2013

State Award Amount: \$2 million

University: MUSC

Endowed Chair(s):

Dr. Stephane Meystre
Endowed Chair in Translational Biomedical

Informatics

External Funding Above Match:

\$539,697

Research Focus: The new Center will provide expertise in translational biomedical informatics essential for cutting-edge, innovative methodologies to link genetic/ genomic data with vast amounts of clinical data. The contributions of the center to data sharing/analysis will decrease cost and increase efficiency in research and healthcare delivery and provide a robust IT platform for industry partnerships and new company formation.

VISION SCIENCE

Award Date: 2005

State Award Amount: \$4.5 million

University: MUSC

Endowed Chair(s):

Dr. Baerbel Rohrer

Chair in Gene and Pharmaceutical Treatment of Retinal Degenerative Diseases

MUSC is recruiting Barbara and Stanley Andrie Endowed Chair in Bioengineering and Vision Research.

Corporate Partner(s): Alcon Labs, Taligen, Alexion Pharmaceuticals

External Funding Above Match

\$30.1 million

Research Focus: New treatments for macular degeneration, development of new anti-glaucoma agents and innovations in cataract surgery. The Center also focuses on using advances in bioengineering and material sciences to improve the diagnosis, treatment, and prevention of eye diseases.

^{*}Graduated Center

Energy & Alternative Fuels

CATALYSIS FOR RENEWABLE FUELS*

Award Date: 2005

State Award Amount: \$3 million

Universities: USC

Endowed Chair(s): Dr. John Regalbuto

External Funding Above Match:

\$14.8 million

Research Focus: Developing catalysts that allow production of alternative fuels from renewable sources, thereby reducing dependence on imported oil and carbon fuel. The Center focuses on synthesizing inorganic catalysts for converting biomass to biofuels and synthesizing electrocatalysts for solar fuels and fuel cells.

GENERAL ATOMICS CENTER FOR THE DEVELOPMENT OF TRANSLATIONAL NUCLEAR TECHNOLOGY*

Award Date: 2009

State Award Amount: \$3 million

University: UofSC

Endowed Chair(s):

Dr. Theodore Besmann Energy and Nuclear Security

Corporate Partner(s):

General Atomics

External Funding Above Match:

\$45 million

Research Focus: The production of biofuels and coal to liquid fuels using nuclear process heat for more efficient production and the reduction of wastes associated with recycling of used fuel, seeking more long term strategies to manage used fuel, recovery of energy value in used fuel, and eliminating concerns over proliferation associated with recycling used fuel.

NUCLEAR SCIENCE AND ENERGY

Award Date: 2008

State Award Amount: \$3 million

Universities: UofSC

Endowed Chair(s):

Dr. Dan Gabriel Cacuci
Nuclear Power and Advanced Materials

Corporate Partner(s):

Duke Energy, Progress Energy, SCANA, Westinghouse

External Funding Above Match:

\$7.3 million

Research Focus: Performance, efficiency, and maintenance issues at existing and future nuclear power plants using expertise modeling and simulation related to nuclear fuels and materials.

SMART GRID TECHNOLOGY

Award Date: 2013

State Award Amount: \$5 million

University: Clemson

Endowed Chair(s):

Dr. Johan Enslin Duke Energy Chair in Smart Grid

Technology

Corporate Partner(s):

Duke Energy

External Funding Above Match:

\$8.9 million

Research Focus: Develop technology to better plan and operate electric power systems.

SOLID OXIDE FUEL CELLS*

Award Date: 2006

State Award Amount: \$3 million

Universities: UofSC

Endowed Chair(s):Dr. Kevin Huang, UofSC *Solid Oxide Fuel Cells*

External Funding Above Match

\$60.1 million

Research Focus: Develop solid oxide fuel cells for use in large, high-power systems such as industrial sites and electricity generating stations as well as for mobile power for computers, cell phones, and other electronics.

STRATEGIC APPROACHES TO THE GENERATION OF ELECTRICITY (SAGE)*

Award Date: 2007

State Award Amount: \$5 million

Universities: UofSC

Endowed Chair(s): Dr. Jochen Lauterbach

DI. 30CHEH Lauterbach

External Funding Above Match

\$14.2 million

Research Focus: Developing, improving, and advancing technologies to enhance the environmental performance of electricity production. Other work focuses on converting CO2 to chemicals, fuel cell and hydrogen storage-related research, and chemical production from coal to biomass.

Information Science

CYBERINSTITUTE

Award Date: 2008

State Award Amount: \$2 million

Universities: Clemson

Endowed Chair(s):

Dr. Sally McKee

C. Tycho Howle Endowed Chair in Collaborative Computing Environments

Corporate Partner(s):

Omnibond Systems, LLC

External Funding Above Match:

\$7.6 million

Research Focus: Connecting research and scholarship, particularly in interdisciplinary aspects of high-performance computing, networking, and data storage; the security of information systems and networks; human-computer interactions; interpretation; and visualization to the commercial sector via strategic industrial partnerships. Conduct research in conjunction with the Clemson University Cyber-Institute.

DATA ANALYSIS, SIMULATION, IMAGING, AND VISUALIZATION

Award Date: 2010

State Award Amount: \$2 million

Universities: UofSC

Endowed Chair(s):

Dr. Wolfgang Dahmen Williams-Hedberg-Hedberg Chair of Mathematics

External Funding Above Match:

\$3.3 million

Research Focus: Develop technology for transforming data into knowledge concentrating on inline data processing, multi-sensor data acquisition, tissue modeling, atomic scale modeling, and bioimaging.

INNOVATION AND COMMERCIALIZATION

Award Date: 2004

State Award Amount: \$5 million

University: UofSC

*Graduated Center

Endowed Chair(s):

Dr. Laura B. Cardinal
Discovery and Innovation

Corporate Partner(s):

Fluor Foundation and Savanah River

Nuclear Solutions LLC

External Funding Above Match:

\$19.8 million

Research Focus: The innovation, commercialization, and new venture development of research in the SmartState Centers, leading to technology commercialization and transfer activities in collaboration with business organizations and public sector stakeholders.

OPTOELECTRONICS*

Award Date: 2008

State Award Amount: \$2 million

University: Clemson

Endowed Chair(s):

Dr. Eric Johnson
PalmettoNet Endowed Chair
in Optoelectronics

Corporate Partner(s):

Advanced Photonic Crystal, Tetramer Technologies

External Funding Above Match:

\$13.1 million

Research Focus: Improving devices, systems, and protocols used in high-speed optical communications

networks.

SUSTAINABLE DEVELOPMENT*

Award Date: 2010

State Award Amount: \$4 million

University: Clemson

Endowed Chair(s):

Dr. Mark Johnson Thomas F. Hash '69 Endowed Chair in Sustainable Development

External Funding Above Match

\$6.5 million

Research Focus: Developing new technologies to support real-time monitoring and management of natural and built environments

through the Intelligent River® Project. The Center has created wireless sensor networks that can reliably monitor and transmit environmental data in near real time.

TOURISM AND ECONOMIC DEVELOPMENT*

Award Date: 2005

State Award Amount: \$2 million

University: UofSC

Endowed Chair(s):

Dr. Simon Hudson

Tourism is recruiting one endowed chair.

Corporate Partner(s):

Rawle Murdy US Travel Association (USTA)

External Funding Above Match

\$601,297

Research Focus: Tourism is a \$17 billion industry in South Carolina. The Center conducts cutting-edge tourism and hospitality research initiatives that will improve South Carolina's competitiveness as a tourism destination.

URBAN ECOLOGY AND RESTORATION*

Award Date: 2006

State Award Amount: \$2 million

University: Clemson

Endowed Chair(s):

Dr. Robert F. Baldwin Margaret H. Lloyd SmartState Chair in Urban Ecology

External Funding Above Match:

\$8.7 million

Research Focus: Generating scholarship by building collaborations in applied ecology and environmental science, habitat ecology and restoration, wetland and watershed management; conservation biology; private-public networks for conservation; payments for ecosystem services; urban ecology; environmental education; and by developing careers of young scientists and educators.



CANCER DRUG DISCOVERY*

Award Date: 2004

State Award Amount: \$5 million

Universities: MUSC, UofSC

Endowed Chair(s):

Dr. John LeMasters, MUSC GlaxoSmithKline Endowed Chair

Dr. Patrick Woster, MUSC Chemical Biology/Medicinal Chemistry Endowed Chair

Dr. Mark Hamann, MUSC Charles & Carol Cooper Chair in Pharmacy

Dr. Mitzi Nagarkatti, UofSC Structural Biology Endowed Chair

Corporate Partner(s):

GlaxoSmithKline

External Funding Above Match:

\$24.1 million

Research Focus: Advanced biomedical screening technologies to identify disease mechanisms and targets, and also screening drug candidates. Structural biology for target analysis, chemical biology for designing drug candidates, and advanced biomedical screening technologies.

CANCER STEM CELL BIOLOGY AND THERAPY*

Award Date: 2008

State Award Amount: \$5 million

University: MUSC, UofSC

Endowed Chair(s):

Dr. Sophie Paczesny, MUSC Abney Endowed Chair Remembering Sally Abney Rose

Dr. Xue Zhong Yu, MUSC Robert K. Stuart, MD Distinguished Chair in Hematology and Oncology

External Funding Above Match:

\$35.9 million

Research Focus: Developing new technologies for isolating, growing, and manipulating cancer stem cells. This will enable the Center to find ways to use adult stem cells from bone marrow or organs to treat cancer.

GASTROINTESTINAL CANCER DIAGNOSTICS

Award Date: 2005

State Award Amount: \$5 million

Universities: MUSC

Endowed Chair(s):

MUSC is recruiting the Charles Westerfield Coker Distinguished Chair in Gastrointestinal Malignancy

Corporate Partner(s):

Roche Carolina, Bank of America

External Funding Above Match:

\$22.9 million

Research Focus: Clinical and translational gastrointestinal oncology and biomarker development and gastrointestinal (GI) malignancies Bringing state-of-the-art translational medicine to all GI cancer patients in South Carolina, thereby decreasing the overall impact of cancer mortality and morbidity and closing disparity gaps throughout the state.

LIPIDOMICS, PATHOBIOLOGY AND THERAPY*

Award Date: 2009

State Award Amount: \$5 million

University: MUSC

Endowed Chair(s):

Dr. J. Alan Diehl Lipidomics & Pathobiology

Dr. Besim Ogretmen
Lipidomics Drug Discovery

Corporate Partner(s):

Duke Energy

External Funding Above Match:

\$41.8 million

Research Focus: Develop models for translational research and study of lipidomics and their pathobiology with an emphasis on cancer and inflammation.

MEDICATION SAFETY AND EFFICACY

Award Date: 2008

State Award Amount: \$2 million

Universities: MUSC, UofSC

Endowed Chair(s):

Dr. Charles Bennett, UofSC Frank P. and Josie M. Fletcher Professor of Pharmacy

External Funding Above Match

\$6.7 million

Research Focus: Increasing drug safety and effectiveness, as well as decreasing medication errors by identifying the incidence and significance of adverse drug events.

TRANSLATIONAL CANCER THERAPEUTICS*

Award Date: 2004

State Award Amount: \$5 million

Universities: MUSC, UofSC

Endowed Chair(s):

Dr. Kenneth Tew, MUSC John C. West Endowed Chair in Cancer Research

Dr. Igor Roninson, UofSC Endowed Chair in Drug Efficacy

External Funding Above Match

\$42.8 million

Research Focus: Development of new approaches in cancer treatment, including the discovery and development of new drugs. Research also focuses on utilizing mouse models predisposed to cancer to study the impact of gene misregulation and therapeutic agents on tumor development, and the identification and inhibition of new cancer drug targets.

*Graduated Center

SMARTSTATE PROGRAM® Endowed Chairs

The role of SmartState Program® Endowed Chairs is to serve as catalyst for the state's knowledge economy. Seventy-four chairs of 86 approved chairs have been filled at Clemson University, the Medical University of South Carolina, and the University of South Carolina across 51 SmartState Centers.

The SmartState Program® welcomed five new endowed chairs this year: Dr. Sophie Paczesny, Dr. John Wrangle, Dr. Lesley Ross, Dr. Gonzalo Revuelta, Dr. Vanessa Hinson



ROBERT F. BALDWIN Urban Ecology and Restoration Clemson



JOHN BALLATO Optical Materials/ Photonics Clemson



BRIAN BENICEWICZ
Polymer Nanocomposites



CHARLES BENNETT Medication Safety and Efficacy UofSC



THEODORE BESMANN General Atomics UofSC



LEONARDO BONILHA Gastrointestinal Cancer Diagnostics MUSC



JOHN BROOKS Effectiveness Research in Orthopedics UofSC



DAN GABRIEL CACUCINuclear Science and
Energy
UofSC



LAURA B. CARDINAL Innovation and Commercialization UofSC



KENNETH CATCHPOLE Health Facilities Design and Testing MUSC



CYNTHIA CORBETT CEPS UofSC



CHRISTOPHER COWAN
Neurosciences
UofSC



WOLFGANG DAHMEN Data Analysis Simulation Imaging and Visualization UofSC



NANCY DEMORE Tobacco-related Malignancies MUSC



THOMAS DISALVO Molecular Proteomics in Cardiovascular Disease and Prevention MUSC



RICHARD DRAKE Proteomics MUSC



STEPHEN A. DUNCAN *Regenerative Medicine*MUSC



JOHAN ENSLIN Smart Grid Technology Clemson



CAROL FEGHALI-BOSTWICK Inflammation & Fibrosis Research MUSC



ZORAN FILIPIAutomotive Design and Development
Clemson



MARVELLA FORD Prostate Cancer Disparities MUSC/SCSU



JULIUS FRIDRIKSSON SeniorSMART® UofSC



BRUCE GAO Advanced Tissue Biofabrication Clemson



JEREMY GILBERT Regenerative Medicine Clemson



MARK HAMANN Cancer Drug Discovery MUSC



VANESSA HINSON Neurosciences MUSC



KEVIN HUANG Solid Oxide Fuel Cells UofSC



CHANITA HUGHES-HALPERT Prostate Cancer Disparities MUSC



MICHAEL JANECH Marine Genomics MUSC



ERIC JOHNSONOptoelectronics
Clemson



MARK JOHNSON Sustainable Development Clemson



ANJALI JOSEPH Health Facilities Design and Testing Clemson



VENKAT KROVI Vehicle Electronic Systems Integration Clemson



JOCHEN LAUTERBACH Strategic Approaches to the Generation of Electricity (SAGE) UofSC



JAMIE LEAD Environmental Nanoscience and Risk UofSC



JOHN LEMASTERS
Cancer Drug Discovery
MUSC



LES LENERTHealthcare Quality
MUSC



SUE LEVKOFF SeniorSMART® UofSC



XIAOMING LI Healthcare Quality UofSC



SHELDON E. LITWIN Molecular Proteomics in Cardiovascular Disease and Prevention MUSC



HESHING LIU Brain Imaging MUSC



SCOTT MASON Supply Chain Optimization and Logistics Clemson



SALLY MCKEECyberinstitute
Clemson



LAINE MEARS Automotive Manufacturing Clemson



ANAND S. MEHTA Proteomics MUSC



STEPHANE MEYSTRE Translational Biomedical Informatics MUSC



MARTIN MORAD Regenerative Medicine UofSC



MITZI NAGARKATTI Cancer Drug Discovery UofSC



DEEPAK NIHALANI Renal Disease Biomarkers MUSC



JIHAD OBEID Clinical Effectiveness and Patient Safety MUSC



BESIM OGRETMEN Lipidomics Pathobiology and Therapy MUSC



SOPHIE PACZESNY Cancer Stem Cell Biology and Therapy MUSC



CHRIS PAREDIS
Automotive Systems
Integration
Clemson



JOHN REGALBUTO Catalysis for Renewable Fuels UofSC



BAERBEL ROHRER Vision Science MUSC



GONZO REVUELTA Neurosciences MUSC



IGOR RONINSON Translational Cancer Therapeutics UofSC



CHRIS RORDEN Brain Imaging UofSC



LESLEY ROSS SeniorSMART® UofSC



JOHN SCHAEFER Clinical Effectiveness and Patient Safety MUSC



SOUVIK SEN Stroke UofSC



HENRY SUCOV Advanced Tissue Biofabrication MUSC



KENNETH TEW Translational Cancer Therapeutics MUSC



BOBBY THOMAS Child Neurotherapeutics MUSC



FRANK TRIEBER
Technology Center to
Enhance Healthful
Lifestyles
MUSC



BETTY TSAO Inflammation and Fibrosis Research MUSC



JEFFERY TWISS Childhood Neurotherapeutics UofSC



MAREK URBAN Advanced Fiber Materials Clemson



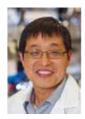
DELIA WEST Technology Center to Enhance Healthful Lifestyles UofSC



PATRICK WOSTER
Cancer Drug Discovery
MUSC



JOHN WRANGLE Tobacco-Related Malignancy MUSC



XUE ZHONG YU Cancer Stem Cell Biology and Therapy MUSC

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SMARTSTATESC.ORG

South Carolina Commission on Higher Education 1122 Lady Street, Suite 300 Columbia, South Carolina 29201

FINANCIAL AND COMPLIANCE REPORT

JUNE 30, 2020

YEAR ENDED JUNE 30, 2020

TABLE OF CONTENTS

INTRODUCTORY SECTION	<u>Page</u>
Review Board	
Transmittal Letter	2- 9
SECTION I - FINANCIAL STATEMENTS	
INDEPENDENT AUDITOR'S REPORT ON FINANCIAL STATEMENT	10 and 11
Statement of program revenues, expenditures and changes in fund	
Balances – consolidated summary	12 and 13
Notes to financial statement	14 - 17
SECTION II – SUPPLEMENTARY INFORMATION	
Schedule of program revenues, expenditures and changes in fund	
Balances - Clemson University	18 - 26
Schedule of program revenues, expenditures and changes in fund	
Balances – Medical University of South Carolina	27 - 39
Schedule of program revenues, expenditures and changes in fund	
Balances – University of South Carolina	40 - 53

REVIEW BOARD JUNE 30, 2020

<u>NAME</u>	POSITION	<u>APPOINTMENT</u>
Karoly Kerekes	Vice-Chair	Governor
Melvin C. Williams	Member	President Pro Tempore of the Senate
Lisa Main	Secretary	Speaker of the House
Robert W. Pearce, Jr.	Member	Speaker of the House
Charles W. Garnett	Member	Governor
Melvin C. Williams	Member	President Pro Tempore of the Senate
Roberta Bankhead Wood	Member	Chair, House Ways and Means Committee
James P. Clements	Ex-Officio	President, Clemson Univ.
David J. Cole	Ex-Officio	President, Medical Univ. of S.C.
Robert Caslen	Ex-Officio	President, Univ. of S.C.



SmartState® Program Transmittal Letter Period: Fiscal Year 2019-2020

This transmittal letter provides an overview of the SmartState program and data covering the fiscal year ended June 30, 2020. This discussion and analysis should be read in conjunction with the financial statement and accompanying notes. The financial statements have been audited by an independent auditor (Mauldin & Jenkins) in accordance with S.C. Code of Laws, as amended, Section 2-75-10.

Overview of the SmartState Program

In 2002, the South Carolina General Assembly passed the Research Centers of Economic Excellence (RCEE) Act. The legislation originally required appropriation of \$200 million through 2010¹ from the South Carolina Education Lottery to establish unique Centers of Economic Excellence at South Carolina's three senior research institutions: Clemson University, University of South Carolina (USC), and Medical University of South Carolina (MUSC). Each Center of Economic Excellence (Center) specializes in unique, knowledge-based economy research (in fields such as engineering, nanotechnology, biomedical science, and energy science) that promotes and creates enhanced economic opportunities for the state. In 2008, the General Assembly amended the RCEE Act to replace the \$200 million funding cap and the 2010 sunset date with a statutory guarantee of \$30 million in annual funding so long as (a) Lottery-supported scholarships have been fully funded, and (b) the SmartState Review Board has, by the end of the most previous fiscal year, awarded a minimum of 80% of overall appropriations since 2003.

The RCEE Act also created the SmartState Review Board, which provides program oversight. The Review Board is composed of 11 members: three appointed by the

¹ The General Assembly appropriated \$30 million per year in the state budget for fiscal years 2003 through 2008. The General Assembly has appropriated no new funds for fiscal years 2009 through 2020.

Governor; three by the President Pro Tempore of the Senate; three by the Speaker of the House of Representatives; one by the Chair of the Senate Finance Committee; and one by the Chair of the House Ways & Means Committee. Membership terms are three years, and individuals may serve three total terms. Presidents of South Carolina's three research universities serve as ex-officio, non-voting members of the Review Board. Staff and operational support for the SmartState Program are provided by CHE.

The SmartState Review Board held its first meeting on October 17, 2002, at which it approved formal *Bylaws*. On December 5, 2002, the Review Board approved Program *Guidelines* and *Requests for Proposals Guidelines for 2002-2003*, which established a competitive, annual process whereby Centers of Economic Excellence are proposed by the research institutions and approved by the Review Board. The three-tier review process includes two rigorous scientific evaluations (a technical review and an onsite panel review), followed by the Review Board's analysis of the review findings and a formal vote on individual proposals. In 2008, the General Assembly amended the RCEE Act by encoding the technical and scientific review process for proposals.

Once a new Center is approved, an institution has 19 months in which to solicit non-state (private, federal, or municipal) investors to pledge dollar-for-dollar matching of a Center's total state award (between \$2 million to \$5 million). In February 2007, the SmartState Review Board approved a policy whereby an institution may apply for up to two six-month extensions beyond the 18-month pledge verification deadline. All matching pledges must be realized within 78 months of a Center's approval date. In February 2009, the SmartState Review Board approved a policy whereby an institution may apply for as many as two six-month extensions beyond the 78-month drawdown deadline.

State funds may only be drawn against perfected (eligible and received) non-state pledges. The majority of funds (all of the state funds plus no less than 30% of the non-state match) is placed in endowment, which may be used to pay the salaries or salary supplements of the world-class scientists (endowed chairs) specially recruited to lead each Center, as well as to pay for the purchase of specialized equipment, laboratory construction, other faculty, and research assistants. In 2008, the General Assembly amended the RCEE Act by codifying the use of a certain portion (determined by the

SmartState Review Board) of non-state matching funds "to pay for initial operating costs" of Centers (S.C. 2-75-100).

On December 12, 2006, the SmartState Review Board convened a Cost Share Work Group. Representatives from all three research institutions, the Office of the State Treasurer, and CHE gathered to discuss accounting standards related to the RCEE Act. On February 26, 2007, the Review Board approved a Cost Share Accounting Policy which contains specific guidelines for claiming and valuing in-kind matches. In 2008, the General Assembly amended the RCEE Act to encode the use of cash equivalent and in-kind donations as valid non-state matches for the SmartState Program.

In 2010, the General Assembly amended the RCEE act to create a new type of SmartState award to be made in concert with the South Carolina Department of Commerce. Onequarter of the unallocated Centers of Excellence Matching Endowment funds were dedicated for funding such "SmartState Commerce Awards." SmartState Commerce Awards may not individually exceed \$2 million and do not require the dollar-for-dollar, non-state match of standard SmartState awards. In place of the matching requirement, the Secretary of Commerce is required to certify that a "significant capital investment" has been made in the related research field of the proposed SmartState Commerce Award professorial endowment. These revisions became effective January 1, 2011. The SmartState Review Board issued an RFP for awards in FY 2011. At the request of the Department of Commerce, the awards for this component of the SmartState Program have not been made. However, during the 2015-2016 legislative session, the SC General Assembly approved Proviso 117.139², which states that the SmartState Endowed Chairs Program funds earmarked for Commerce Awards shall be transferred by the Commission on Higher Education to the Department of Commerce's Applied Research Centers by August 1, 2016. The program fund amount of \$2.8 million was transferred to the Department of Commerce on July 25, 2016.

Over time, each research institution has developed concentrated SmartState focus areas. Clemson University's core strengths lie in the area of automotive and transportation technology, advanced materials and biotechnology/biomedical sciences. USC's Centers

4

² Part 1B Proviso 117.139, FY 2015-16, states: The Endowed Chairs Program funds that have been set aside for "Commerce Awards" shall be transferred by the Commission on Higher Education to the Department of Commerce's Applied Research Centers by August 1, 2016.

generally fall within three clusters: future fuels, biomedical sciences, and nanotechnology. MUSC's strengths lie in the areas of neuroscience, cancer research, vascular disease, and health care quality and finance.

One hallmark of the SmartState Program is an almost unprecedented scientific collaboration at the academic level. More than one-third of the Centers are partnerships between and among state public institutions, including three four-year comprehensive teaching universities. Dr. John Schaefer, SmartState Endowed Chair at MUSC's Clinical Effectiveness and Patient Safety Center has noted that such academic collaboration rarely exists—not even at Harvard or Yale. The lure of bonded research partnerships serves as an enticing recruiting tool to the renowned scientists required to lead each Center.

2019 - 20 SmartState Summary Information

At the end of FY 2019-20, the program consists of 51 Centers with 85 approved SmartState Endowed Chairs of which 74 have been appointed. As envisioned by the General Assembly, the SmartState Program has become a successful boost to the state's knowledge-based economy. Of the \$197.6 million³ in SmartState awards granted by the Board through the end of FY 2019-20, \$197.6 million in matching pledges have been committed by non-state sources. Of the committed pledges through FY 2019-20, \$197.6 million have been perfected and drawn down.

The table found on the following pages provides summary information on the Centers from FY 2002-03 through FY 2019-20.

³ To date, the SmartState Review Board has obligated \$17.6 million in accrued program interest for the awarding of additional proposals, as is permitted by statute. To date, the Review Board has used all of the \$17.6 million in accrued interest to fund proposals in the 2008-2009, 2009-2010 and 2012-2013 award cycles.



Summary of Approved SmartState Program Centers of Economic Excellence by Fiscal (Funding) Year (2002-03 – 2019-20)

	Funding Year 2002-2003		
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount
Clemson	Automotive Systems Integration	1	\$5 million
Clemson	Automotive Manufacturing	1	\$5 million
USC	Nanostructures	1	\$4 million
USC/MUSC	Brain Imaging	31	\$5 million
MUSC	Proteomics	2	\$4 million
MUSC	Neuroscience	2^{2}	\$3 million
MUSC/USC/CoC	Marine Genomics	2^{4}	\$4 million
Total Awarded in 2002-2003		12	\$30 million
	Funding Year 2003-2004		
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount
Clemson	Automotive Design & Development	1	\$5 million
Clemson	Electronic Systems Integration	1	\$3 million
Clemson	Photonic Materials	1	\$5 million
USC	Polymer Nanocomposites	1	\$3.5 million
USC	Innovation and Commercialization	14	\$2.5 million
MUSC/Clemson/USC	Regenerative Medicine	3	\$5 million
MUSC/USC	Translational Cancer Therapeutics	2	\$5 million
Total Awarded in 2003-2004		10	\$29 million
	Funding Year 2004-2005		
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount
Clemson	Restoration [WITHDRAWN]	_	[\$3 million]
Clemson	Electron Imaging [WITHDRAWN]	_	[\$5 million]
USC	Catalysis for Renewable Fuels	1	\$3 million
USC	Innovation and Commercialization	[See 03-04]	\$2.5 million
USC/Coastal Carolina	Tourism & Economic Development	1	\$2 million
MUSC	Gastrointestinal Cancer Diagnostics	25	\$5 million
MUSC/USC	Cancer Drug Discovery	4	\$5 million
MUSC	Vision Science	2^{6}	\$4.5 million
Total Awarded in 2004-2005		10	\$22 million

¹Revised to three chairs by act of the SmartState Review Board on January 12, 2009.

²Revised to two chairs by act of the SmartState Review Board on February 9, 2015.

³Revised to two chairs by act of the SmartState Review Board on February 23, 2010.

⁴The The Hydrogen Economy Center was approved during 2003-2004. Funding for one half of this Center was provided in 2003-04, the other half in 2004-2005. In 2014, the name changed to the SmartState Center for Innovation and Commercialization and revised to one chair.

Increased from one to two endowed chairs by act of the SmartState Review Board on September 8, 2008.

⁶Revised to two chairs and relinquished USC as a collaborative partner by act of the SmartState Review Board on February 11, 2014.

Funding Year 2005-2006						
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount			
Clemson	Supply Chain Optimization & Logistics	1	\$2 million			
Clemson	Urban Ecology and Restoration	1	\$2 million			
Clemson	Advanced Fiber-Based Materials	1	\$4 million			
Clemson	Molecular Nutrition [WITHDRAWN]	_	[\$2 million]			
USC	Solid Oxide Fuel Cells	1	\$3 million			
USC/MUSC	Childhood Neurotherapeutics	3	\$5 million			
MUSC	Molecular Proteomics in Cardiovascular Disease & Prevention	2	\$5 million			
MUSC/USC	Clinical Effectiveness & Patient Safety ⁷	3	\$5 million			
Total Awarded in 2005-2006	12	\$26 million				
	Funding Year 2006-2007					
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount			
Clemson/MUSC	Health Facilities Design & Testing ⁸	2	\$2 million			
USC	Rehabilitation and Reconstruction Science	1	\$5 million			
USC	Strategic Approaches to the Generation of Electricity	1	\$5 million			
USC/MUSC/Clemson	Healthcare Quality	2	\$5 million			
USC/Clemson	Senior SMART TM Center ⁹	3	\$5 million			
MUSC	Tobacco-Related Malignancy	2	\$5 million			
MUSC/USC	Stroke	3	\$5 million			
Total Awarded in 2006-2007	1	14	\$32 million			

On September 9, 2008, the SmartState Review Board approved a revision to this proposal which relinquished Clemson University as a collaborative partner and transferred the Chair at Clemson to MUSC.

The state award total for this Center was revised from \$5 million to \$2 million by the SmartState Review Board on June 11, 2012.

The SeniorSMART Center of Economic Excellence was approved in 2007-2008. Funding was provided from 2006-2007 dollars.

SC Centers of Economic Excellence Funded Proposals (continued)

Institution (fiscal institution first)	Funding Year 2007-2008 Proposal Title	Endowed Chairs	Proposal Amount				
Clemson	Optoelectronics	1	\$2 million				
Clemson	CyberInstitute	1	\$2 million				
USC	Environmental Nanoscience and Risk	1	\$3 million				
USC	Nuclear Science and Energy	1	\$3 million				
MUSC	Renal Disease Biomarker	2	\$5 million				
MUSC/Clemson	Cancer Stem Cell Biology	2	\$5 million				
MUSC/USC/Clemson	Advanced Tissue Biofabrication	3	\$5 million				
MUSC/USC/SCSU	Cancer Disparities ¹⁰	3	\$3.6 million				
MUSC/USC	Medication Safety & Efficacy ¹¹	1	\$2 million				
Total Awarded in 2007-2008	15	\$30.6 million					
Funding Year 2008-2009							
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount				
Clemson	Tissue Systems Characterization [WITHDRAWN]	_	[\$3 million]				
USC	General Atomics Center for Development of Transformational Nuclear Technologies	1	\$3 million				
USC/MUSC	Healthful Lifestyles ¹²	2	\$3 million				
MUSC	Lipidomics, Pathobiology and Therapy	2	\$5 million				
Total Awarded in 2008-2009		5	\$11 million				
	Funding Year 2009-2010						
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount				
(Histai Histitation Hist)							
,	Sustainable Development	1	\$4 million				
Clemson	Sustainable Development Data Analysis	1	\$4 million \$2 million				
Clemson USC MUSC	*						

¹⁰The Cancer Disparities Center of Economic Excellence was approved in 2008-2009. Funding was provided from 2007-2008 dollars.

¹¹The Medication Safety & Efficacy Center was approved in 2008-2009. Funding was provided from 2007-2008 dollars. ¹²The Healthful Lifestyles Center of Economic Excellence was approved in 2009-2010 with funding from 2008-2009 dollars.

SC Centers of Economic Excellence Funded Proposals (continued)

Funding Year 2012-2013						
Institution (fiscal institution first)	Proposal Title	Endowed Chairs	Proposal Amount			
Clemson	Smart Grid Technology	1	\$2 million			
USC	Multifunctional Materials and Structures	1	\$2 million			
MUSC	Translational Biomedical Informatics	1	\$2 million			
Total Awarded in 2012-2013		3	\$6 million			

Program Totals ¹				
TOTAL LOTTERY APPROPRIATIONS (2003-2008)	\$180 million			
ACCRUED PROGRAM INTEREST USED FOR ADDITIONAL AWARDS *	\$17.6 million			
* As permitted by S.C. 2-75-30(A). TOTAL FUNDS AWARDED (2003-2013)	\$197.6 million			

Research Institution Totals							
Institution	Centers Awarded	(State Funds Drawn			
Clemson University	13	13 16 13 (3)		13 16 13 (3)		\$43,000,000	
University of South Carolina	18	28	24 (4)	\$66,650,000			
Medical University of South Carolina	20	41	34 (7)	\$88,100,000			
TOTALS	51	85	71 (14)	\$197.6 million			

¹Program totals are as of fiscal year end June 30, 2020. For Research Institution Totals, Centers Awarded and State Funds Drawn for each institution are tallied on the fiscal agent in cases of joint proposals. Chairs are tallied based on the assigned institution as of November 2020. For updated information on Centers and program totals, contact CHE or see www.smartstaesc.org.



INDEPENDENT AUDITOR'S REPORT

To the Review Board South Carolina Centers of Economic Excellence Columbia, South Carolina

Report on the Financial Statement

We have audited the total columns for Clemson University, the Medical University of South Carolina, and the University of South Carolina included in the accompanying Statement of Program Revenues, Expenditures and Changes in Fund Balances of the **South Carolina Centers of Economic Excellence** for the year ended June 30, 2020, and the related notes to the financial statement.

Management's Responsibility for the Financial Statement

Management is responsible for the preparation and fair presentation of this financial statement in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the financial statement that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on the financial statement based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statement. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statement in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statement.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statement referred to above presents fairly, in all material respects, the revenues, expenditures and changes in fund balances of each university within the South Carolina Centers of Economic Excellence for the year ended June 30, 2020, in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

We draw attention to Note 2 to the financial statement, which describes that the accompanying financial statement was prepared for the purpose of complying with the South Carolina Research Centers of Economic Excellence Act and is not intended to be a complete presentation of the South Carolina Centers of Economic Excellence's financial position. Our opinion is not modified with respect to this matter.

Other Matters

Other Information

Our audit was conducted for the purpose of forming an opinion on the total column for each university in the financial statement. The introductory section and the supplementary information, as presented in the statement and as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the financial statement.

The supplementary information, as listed in the table of contents, is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statement. Such information has been subjected to the auditing procedures applied in the audit of the financial statement and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statement or to the financial statement itself, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the financial statement as a whole.

The introductory section has not been subjected to the auditing procedures applied in the audit of the financial statement, and accordingly, we do not express an opinion or provide any assurance on it.

Mauldin & Jenkins, LLC

Columbia, South Carolina December 3, 2020

SOUTH CAROLINA CENTERS OF ECONOMIC EXCELLENCE STATEMENT OF PROGRAM REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - CONSOLIDATED SUMMARY YEAR ENDED JUNE 30, 2020

	Clemson University					Medical University of South Carolina				
	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total
	Endowment	Endowment	Experidable	Lamings	Iotai	Endowment	Endowment	Experidable	Earnings	Iotai
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,750	\$ 2,750
Non-state matching funds	-	2,000			2,000	· -	-	12,428	3,007	15,435
Other contribution revenue	_	_,	_	32,165	32,165	_	_	,	-,	
Total contribution revenue		2,000		32,165	34,165			12,428	5,757	18,185
Total Contribution Tevendo		2,000		02,100	04,100			12,120	0,101	10,100
Investment Income										
Realized gain (loss)	-	_	_	1,778,163	1,778,163	_	_	_	(3,568,568)	(3,568,568)
Unrealized gain (loss)	_	_	_	(1,346,818)	(1,346,818)	_	_	_	1,026,580	1,026,580
Endowment income	-	_	_	71,912	71,912	_	_	_	1,155,187	1,155,187
Total investment income				503,257	503,257				(1,386,801)	(1,386,801)
Total revenue	-	2,000	-	535,422	537,422	-	-	12,428	(1,381,044)	(1,368,616)
Expenditures										
Personal services	-	-	-	2,459,716	2,459,716	-	-	-	2,646,848	2,646,848
Fringe	-	-	-	794,018	794,018	-	-	-	1,071,405	1,071,405
Travel	-	-	-	139,092	139,092	-	-	-	60,716	60,716
Supplies	-	-	-	158,975	158,975	-	-	-	485,912	485,912
Contractual	-	-	-	-	-	-	-	3,156	157,775	160,931
Tuition assistance	-	-	-	35,966	35,966	-	-	-	-	-
Fixed charges	-	-	-	-	-	-	-	-	30,506	30,506
Administrative fees	-	-	-	-	-	-	-	621	1,332,943	1,333,564
Other	-	-	-	-	-	-	-	456	174,288	174,744
Facilities	-	-	-	198,254	198,254	-	-	-	· -	-
Professional & other fees	-	-	-	294,050	294,050	_	-	-	24,808	24,808
Equipment	_	_	_	175,361	175,361	_	_	_	308,899	308,899
Total expenditures				4,255,432	4,255,432			4,233	6,294,100	6,298,333
rotal experientares				4,200,402	4,233,432			4,200	0,234,100	0,230,333
Excess (deficiency) of revenues over										
(under) expenditures	_	2,000	_	(3,720,010)	(3,718,010)	_	_	8,195	(7,675,144)	(7,666,949)
(==) =		_,		(=,:==,=:=)	(0,110,010)			2,.22	(-,,,	(-,,,
Transfers	<u>-</u> _			134,399	134,399			(192,803)	(133,122)	(325,925)
Net Change in Fund Balances	-	2,000	-	(3,585,611)	(3,583,611)	-	-	(184,608)	(7,808,266)	(7,992,874)
F	40.000.000	07 700 704	455.000	40 400 040	404.045.044	05 500 000	05 400 070	5.007.000	00 000 004	400 004 400
Fund Balances - June 30, 2019	43,000,000	37,780,721	155,980	43,108,313	124,045,014	85,599,999	35,496,979	5,927,893	33,299,261	160,324,132
Fund Balances - June 30, 2020	\$ 43,000,000	\$ 37,782,721	\$ 155,980	\$ 39,522,702	\$ 120,461,403	\$ 85,599,999	\$ 35,496,979	\$ 5,743,285	\$ 25,490,995	\$ 152,331,258
i una Balances - June 30, 2020	Ψ 40,000,000	Ψ 31,102,121	Ψ 100,300	Ψ 00,022,102	Ψ 120,401,403	Ψ 00,000,888	Ψ 33,430,979	Ψ 0,140,200	Ψ 23,430,393	Ψ 132,331,230

See notes to financial statements.

SOUTH CAROLINA CENTERS OF ECONOMIC EXCELLENCE STATEMENT OF PROGRAM REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - CONSOLIDATED SUMMARY YEAR ENDED JUNE 30, 2020

	University of South Carolina					Total -	Consolidated Sun	nmarv		
	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,750	\$ 2,750
Non-state matching funds	· -	2,340	_	241,697	244,037	· -	4,340	12,428	244,704	261,472
Other contribution revenue	-	-	500	406,396	406,896	_	-	500	438,561	439,061
Total contribution revenue		2,340	500	648,093	650,933		4,340	12,928	686,015	703,283
Investment Income										
Realized gain (loss)	_	_	_	_	_	_	_	_	(1,790,405)	(1,790,405)
Unrealized gain (loss)	_	_	_	2,405,328	2,405,328	_	_	_	2,085,090	2,085,090
Endowment income	-	_	7,335	536,679	544,014	_	_	7,335	1,763,778	1,771,113
Total investment income			7,335	2,942,007	2,949,342			7,335	2,058,463	2,065,798
Total revenue	_	2,340	7,835	3,590,100	3,600,275		4,340	20,263	2,744,478	2,769,081
Expenditures										
Personal services	_	_	112,341	2,228,085	2,340,426	_	_	112,341	7,334,649	7,446,990
Fringe	_	_	23,281	447,242	470,523	_	_	23,281	2,312,665	2,335,946
Travel	_	_	2,801	245,025	247,826	_	_	2,801	444,833	447,634
Supplies	-	_	3,803	248,543	252,346	_	_	3,803	893,430	897,233
Contractual	-	_	-	,	,	_	_	3,156	157,775	160,931
Tuition assistance	-	-	_	213,989	213,989	_	_	-	249,955	249,955
Fixed charges	-	-	_		,	_	_	_	30,506	30,506
Administrative fees	-	_	_	417,539	417,539	_	_	621	1,750,482	1,751,103
Other	-	_	179,501	772,409	951,910	_	_	179,957	946,697	1,126,654
Facilities	-	_	-	-	-	_	_	-	198,254	198,254
Professional & other fees	-	_	_	_	-	_	_	_	318,858	318,858
Equipment	_	_	(193)	103,854	103,661	_	_	(193)	588,114	587,921
Total expenditures			321,534	4,676,686	4,998,220			325,767	15,226,218	15,551,985
Excess (deficiency) of revenues over										
(under) expenditures	-	2,340	(313,699)	(1,086,586)	(1,397,945)	-	4,340	(305,504)	(12,481,740)	(12,782,904)
Transfers				191,526	191,526			(192,803)	192,803	
Net Change in Fund Balances	-	2,340	(313,699)	(895,060)	(1,206,419)	-	4,340	(498,307)	(12,288,937)	(12,782,904)
Fund Balances - June 30, 2019	66,500,000	29,577,459	1,161,070	15,242,323	112,480,852	195,099,999	102,855,159	7,244,943	91,649,897	396,849,998
Fund Balances - June 30, 2020	\$ 66,500,000	\$ 29,579,799	\$ 847,371	\$ 14,347,263	\$ 111,274,433	\$ 195,099,999	\$ 102,859,499	\$ 6,746,636	\$ 79,360,960	\$ 384,067,094

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS YEAR END JUNE 30, 2020

NOTE 1. DESCRIPTION OF PROGRAM

The South Carolina Research Centers of Economic Excellence Act (the "Act") was introduced by Chapter 75 of Act No. A356 and passed by the South Carolina General Assembly during the 2002 legislative session. The Act was established to create the South Carolina Centers of Economic Excellence (the Program or SmartState) and the Centers of Excellence Matching Endowment, which originally was to be funded annually by appropriations from the South Carolina Education Lottery in an aggregate amount not to exceed \$200 million by 2010. During the year ended June 30, 2009, the South Carolina General Assembly revised the Act to provide for \$30 million in guaranteed funding each year if (a) the lottery scholarships have been funded, and (b) at least 80% of all appropriations have been awarded by the Review Board through the most recent previous fiscal year. In addition, the Act created the Research Centers of Excellence Review Board (the "Review Board"), which is responsible for awarding state matching funds, for oversight and operation of the fund, and for various accountability requirements established in the statute for the Program. The Review Board consists of eleven members. Of these eleven members, three must be appointed by the Governor of South Carolina, three must be appointed by the President Pro Tempore of the South Carolina Senate, three must be appointed by the Speaker of the South Carolina House of Representatives, one member each must be appointed by the Chair of the Senate Finance Committee and the Chair of the House Ways and Means Committee. The Presidents of the senior research universities of the State of South Carolina (Clemson University, the Medical University of South Carolina, and the University of South Carolina) serve as ex-officio non-voting members.

The purpose of the Act is to create incentives for the senior research universities of South Carolina to raise capital from the private sector to fund endowments for professorships in research areas targeted to create well-paying jobs and enhanced economic opportunities for the people of South Carolina. Non-state funds are used to match dollar-for-dollar funds appropriated by the General Assembly from the South Carolina Education Lottery. The program's intent is to provide \$30 million annually in South Carolina Education Lottery appropriations if (a) the lottery scholarships have been funded, and (b) at least 80% of all appropriations have been awarded by the Review Board through the most recent previous fiscal year. These state appropriations are to be matched by the institutions.

The endowed professorships are awarded to the senior research universities through a competitive application process, which encourages collaboration among the three research universities as well as with other South Carolina institutions of higher education. Awards from the Centers of Excellence Matching Endowment are to be not less than \$2 million and not more than \$5 million. Non-state matching funds are to be raised exclusively from sources other than South Carolina tax dollars, and committed and raised subsequent to January 1, 2002. The Act was amended March 17, 2004, adding Section 90, which allows the research institutions to use federal funds received after July 1, 2003, as non-state matching funds. The Act was further amended on June 25, 2008, adding Section 100, which allows the Review Board to use a portion (as determined by the Review Board) of the non-state match to pay for Center operating costs and which requires that the full state award of any dissolved or withdrawn Center be returned to the Centers of Excellence Matching Endowment. Section 110 was also added on June 25, 2008, which provided the eligibility of in-kind contributions as non-state matches.

NOTES TO FINANCIAL STATEMENTS

NOTE 1. DESCRIPTION OF PROGRAM (CONTINUED)

In 2010, the General Assembly amended the Act to create a new type of SmartState Award to be made in concert with the South Carolina Department of Commerce. One-quarter of the unallocated Centers of Excellence Matching Endowment funds is dedicated for funding such "SmartState Commerce Awards." SmartState Commerce Awards may not individually exceed \$2 million and do not require the dollar-for-dollar non-state match of Standard SmartState awards. In place of a matching requirement, the Secretary of Commerce is required to certify that a "significant capital investment" has been made in the related research field of a proposed SmartState Commerce Award professorial endowment; the intent of SmartState Commerce Award endowment is to "directly support the industry." These revisions became effective January 1, 2011.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Measurement Focus, Basis of Accounting and Financial Statement Presentation:

The Program's financial statement was prepared solely for the purpose of complying with Chapter 75 Section 2-75-10, the South Carolina Research Centers of Economic Excellence Act. The financial statements are not a complete presentation of the financial statements of the Program but one that is otherwise in accordance with Generally Accepted Accounting Principles.

The Program's fund financial statement is reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the Program considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. Expenditures generally are recorded when a liability is incurred, as under accrual accounting.

Property and Equipment:

Property and equipment purchased with program funds are recorded as expenditures in the statement of program revenues, expenditures and changes in fund balances and deemed to be the property of the respective research institution.

Assets Available for Program Use:

State funds committed for Program use are permanently restricted, as well as 30% of the non-state matching funds of each Center of Economic Excellence, as endowment funds. Earnings from the endowments funds may be expended for direct program purposes, as well as any non-state matching funds that exceed the 30% endowment requirement. In-kind contributions of real property, equipment, supplies and other expendable property, and the value of goods and services directly benefiting and specifically identifiable to a project or program may be used to satisfy non-state matching requirements, but may not account for more than 70% of the non-state match total for each proposal.

NOTES TO FINANCIAL STATEMENTS

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Use of Estimates:

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of fund balance at the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

Federal Grants Used as Non-state Matching Funds:

Federal grants used as non-state matching funds by the research institutions are not reflected in the statements of program revenues and expenditures. Such funds are maintained separately from the Program by the research institutions. See Note 4 for additional information.

Realized and Unrealized Investment Gains and Losses and Investment Income:

Realized and unrealized gains and losses and income from the investments in the master investment accounts at each of the Research Institution Foundations and at each of the Research Institutions are allocated periodically, including at year end, to the individual SmartState accounts based on the relationship of the fair value of each individual account to the total fair value of the master investment accounts, and adjusted for additions to or deductions from those accounts.

Transfers:

For each research center, one (1) of the participating institutions is designated as the fiscal agent. However, program activities may occur at more than one (1) of the participating institutions and therefore, transfers of resources to fund program activities are reported from the fiscal agent to the participating institution(s). These transfers will net to zero across all three (3) SmartState research institutions in the consolidated summary.

NOTE 3. ASSETS MAINTAINED BY RESEARCH INSTITUTIONS/FUND BALANCE

The fund balance resulting from program activities are maintained by the research institutions, and is held by the universities, their respective foundations, or by the State Treasurer. At June 30, 2020, fund balance consisted of cash and investments maintained by the research institutions for program purposes and was as follows:

Clemson University	\$ 120,461,403
Medical University of South Carolina	152,331,258
University of South Carolina	111,274,433

Total \$ 384,067,094

NOTES TO FINANCIAL STATEMENTS

NOTE 4. PROPOSALS USING FEDERAL GRANTS FOR NON-STATE MATCHING FUNDS

As described in Note 2, federal grants are eligible for use as non-state matching funds, but are not included in the statements of program revenues and expenditures. The following table displays the total federal awards that have qualified as non-state matching funds and those that have been used toward the non-state match for each proposal as of June 30, 2020:

		Federal Grants Used as Non-state Matching Funds			
			Total		
		C	Qualifying	An	nount Used
		As	S Non-state	A:	s Non-state
Institution	<u>Proposal</u>		Match		Match
Clemson	Optical Materials	\$	772,961	\$	772,961
Clemson	Sustainable Development		1,313,439		1,000,000
Clemson	Advanced Fiber-based Materials		310,000		310,000
MUSC	Proteomics		1,375,919		1,265,030
MUSC	Marine Genomics		2,927,730		2,208,577
MUSC	Translational Cancer Therapeutics		6,174,089		3,001,905
MUSC	Cancer Drug Discovery		6,292,518		3,395,490
MUSC	Gastrointestinal Cancer		3,221,264		2,438,472
MUSC	Vision Science		1,956,478		1,476,419
MUSC	Tobacco-related Malignancies		3,221,264		2,402,853
MUSC	Renal Disease Biomarkers		268,520		254,406
MUSC	Cancer Stem Cell		2,457,288		1,851,876
MUSC	Advanced Tissue Biofabrication		2,578,100		2,502,146
MUSC	Lipidomics		1,624,983		1,523,925
USC	Nanostructures		1,444,820		1,444,820
USC	Brain Imaging		1,336,000		1,336,000
USC	Polymer Nanocomposites		2,020,110		2,020,110
USC	Hydrogen Fuel Cell Economy		661,451		661,451
USC	Renewable Fuel Cells		970,516		970,516
USC	Solid Oxide Fuel Cells		1,106,179		1,106,179
USC	Childhood Neurotherapeutics		1,243,106		1,243,106
USC	Data Analysis		533,444		533,444
USC	Nanoenvironmental Research and				
	Assessment		731,822		731,822
USC	Nuclear Science and Energy		848,512		842,408
USC	General Atomics Center for the Development				
	of Translational Nuclear Technology		1,105,531		1,105,531
		\$	46,496,044	\$	36,399,447

CLEMSON UNIVERSITY

		Automot	ive Design and De	evelopment			Automoti	ve Manufacturing	Integration	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Other contribution revenue										
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	172,184	172,184	-	-	-	215,569	215,569
Unrealized gain (loss)	-	-	-	(127,220)	(127,220)	-	-	-	(167,625)	(167,625)
Endowment income				8,158	8,158				5,519	5,519
Total investment income (loss)				53,122	53,122				53,463	53,463
Total revenue				53,122	53,122				53,463	53,463
Expenditures										
Personal services	-	_	_	425,568	425,568	_	_	-	296,476	296,476
Fringe	-	_	_	146,245	146,245	_	_	_	107,531	107,531
Travel	_	_	_	4,383	4,383	_	_	_	2,143	2,143
Supplies	-	-	-	4,283	4,283	-	-	-	17,504	17,504
Contractual	-	-	-	-	· -	-	-	-	-	-
Tuition assistance	-	-	-	10,000	10,000	-	-	-	-	-
Freight	-	-	-	-	-	-	-	-	-	-
Administrative fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	3,168	3,168	-	-	-	46,473	46,473
Facilities	-	-	-	-	-	-	-	-	-	-
Equipment				1,098	1,098				43,095	43,095
Total expenses				594,745	594,745				513,222	513,222
Excess (deficiency) of revenues										
over (under) expenditures	-	-	-	(541,623)	(541,623)	-	-	-	(459,759)	(459,759)
Transfers										
Net Change in Fund Balances	-	-	-	(541,623)	(541,623)	-	-	-	(459,759)	(459,759)
Fund Balances - June 30, 2019	5,000,000	2,845,991		4,003,889	11,849,880	5,000,000	5,000,000		4,969,947	14,969,947
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 2,845,991	\$ -	\$ 3,462,266	\$ 11,308,257	\$ 5,000,000	\$ 5,000,000	\$ -	\$ 4,510,188	\$ 14,510,188

CLEMSON UNIVERSITY

		Autom	notive Systems In	tegration				Optical Materials	s	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	_	-	-	-
Other contribution revenue	-	-	-	-	-	-	-	-	-	-
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	_	_	231,374	231,374	_	_	_	173,748	173,748
Unrealized gain (loss)	-	-	_	(180,312)	(180,312)	_	_	_	(125,624)	(125,624)
Endowment income	-	_	_	5,715	5,715	_	_	_	9,328	9,328
Total investment income (loss)				56,777	56,777				57,452	57,452
Total revenue			-	56,777	56,777	-			57,452	57,452
Expenditures										
Personal services	-	-	-	267,127	267,127	-	-	-	244,193	244,193
Fringe	-	-	-	67,148	67,148	-	-	-	91,166	91,166
Travel	-	-	-	14,761	14,761	-	-	-	21,863	21,863
Supplies	-	-	-	12,277	12,277	-	-	-	2,716	2,716
Contractual	-	-	-	-	-	-	-	-	-	-
Tuition assistance	-	-	-	-	-	-	-	-	-	-
Freight	-	-	-	-	-	-	-	-	-	-
Administrative fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	48,306	48,306	-	-	-	40,751	40,751
Facilities	-	-	-	198,254	198,254	-	-	-	-	-
Equipment				26,188	26,188				9,561	9,561
Total expenses				634,061	634,061				410,250	410,250
Excess (deficiency) of revenues										
over (under) expenditures	-	-	-	(577,284)	(577,284)	-	-	-	(352,798)	(352,798)
Transfers										
Net Change in Fund Balances	-	-	-	(577,284)	(577,284)	-	-	-	(352,798)	(352,798)
Fund Balances - June 30, 2019	5,000,000	5,000,000	114,921	6,340,201	16,455,122	5,000,000	3,050,852	10,883	4,265,831	12,327,566
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 5,000,000	\$ 114,921	\$ 5,762,917	\$ 15,877,838	\$ 5,000,000	\$ 3,050,852	\$ 10,883	\$ 3,913,033	\$ 11,974,768

CLEMSON UNIVERSITY

			icle Electronic Sy	stems				ain Optimization a		
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	2,000	-	-	2,000
Other contribution revenue										
Total contribution revenue							2,000			2,000
Investment Income										
Realized gain (loss)	-	-	-	109,702	109,702	-	-	-	86,368	86,368
Unrealized gain (loss)	-	-	-	(81,507)	(81,507)	-	-	-	(67, 155)	(67,155)
Endowment income	-	-	-	4,768	4,768	-	-	-	2,213	2,213
Total investment income (loss)				32,963	32,963	-			21,426	21,426
Total revenue				32,963	32,963		2,000		21,426	23,426
Expenditures										
Personal services	_	_	_	213,167	213,167	_	_	_	80,492	80,492
Fringe	_	_	_	80,464	80,464	_	_	_	22,777	22,777
Travel	_	_	_	9,482	9,482	_	_	_	6,441	6,441
Supplies	_	_	_	3,192	3,192	_	_	_	10,395	10,395
Contractual	_	_	_	-,	-,	_	_	_	-	-
Tuition assistance	_	_	_	_	-	_	_	_	6,336	6,336
Freight	_	_	_	_	-	_	_	_	-	-
Administrative fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	(126)	(126)	-	-	-	5,192	5,192
Facilities	-	-	-	` -	` -	-	-	-	-	· -
Equipment	-	-	-	28,514	28,514	-	-	-	5,026	5,026
Total expenses	-	-	-	334,693	334,693	-		-	136,659	136,659
Excess (deficiency) of revenues										
over (under) expenditures	-	-	-	(301,730)	(301,730)	-	2,000	-	(115,233)	(113,233)
Transfers										
Net Change in Fund Balances	-	-	-	(301,730)	(301,730)	-	2,000	-	(115,233)	(113,233)
Fund Balances - June 30, 2019	3,000,000	2,000,000	-	2,287,343	7,287,343	2,000,000	2,003,011	-	1,694,945	5,697,956
Fund Balances - June 30, 2020	\$ 3,000,000	\$ 2,000,000	\$ -	\$ 1,985,613	\$ 6,985,613	\$ 2,000,000	\$ 2,005,011	\$ -	\$ 1,579,712	\$ 5,584,723

CLEMSON UNIVERSITY

		Urban	Ecology and Res	storation			Advan	ced Fiber-based I	Materials	
	State	Non-state	Non-state	Endowment	•	State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Other contribution revenue	-	-	-	-	-	-	-	-	-	-
Total contribution revenue	<u> </u>									
Investment Income										
Realized gain (loss)	-	-	-	91,048	91,048	-	-	-	161,048	161,048
Unrealized gain (loss)	-	_	_	(72,027)	(72,027)	_	_	_	(123,341)	(123,341)
Endowment income	-	-	-	4,541	` 4,541 [°]	-	-	-	5,168	5,168
Total investment income (loss)				23,562	23,562				42,875	42,875
Total revenue				23,562	23,562				42,875	42,875
Expenditures										
Personal services	-	_	_	136,319	136,319	_	_	_	155,657	155,657
Fringe	-	_	_	30,373	30,373	_	_	_	56,124	56,124
Travel	-	_	_	11,059	11,059	_	_	_	10,206	10,206
Supplies	-	-	-	11,532	11,532	-	-	-	5,031	5,031
Contractual	-	-	_	· -	, <u>-</u>	_	_	-	-	, <u>-</u>
Tuition assistance	-	-	-	-	-	-	-	-	647	647
Freight	-	-	-	-	-	-	-	-	-	-
Administrative fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	6,829	6,829	-	-	-	70,096	70,096
Facilities	-	-	-	-	-	-	-	-	-	-
Equipment	-	-	-	23,229	23,229	-	-	-	-	-
Total expenses				219,341	219,341				297,761	297,761
Excess (deficiency) of revenues										
over (under) expenditures	-	-	-	(195,779)	(195,779)	-	-	-	(254,886)	(254,886)
Transfers										
Net Observation Front Balances				(405.770)	(405.770)				(054.000)	(054.000)
Net Change in Fund Balances	-	-	-	(195,779)	(195,779)	-	-	-	(254,886)	(254,886)
Fund Balances - June 30, 2019	2,000,000	2,230,109		1,957,516	6,187,625	4,000,000	3,482,500	30,176	4,136,792	11,649,468
Fund Balances - June 30, 2020	\$ 2,000,000	\$ 2,230,109	\$ -	\$ 1,761,737	\$ 5,991,846	\$ 4,000,000	\$ 3,482,500	\$ 30,176	\$ 3,881,906	\$ 11,394,582

CLEMSON UNIVERSITY

		Health F	acilities Design ar	nd Testina*				Optoelectronics	i.	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Other contribution revenue										
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	99,838	99,838	-	-	-	87,647	87,647
Unrealized gain (loss)	-	-	-	(60,273)	(60,273)	-	-	-	(68,877)	(68,877)
Endowment income		<u> </u>		11,506	11,506				1,904	1,904
Total investment income (loss)		<u> </u>		51,071	51,071				20,674	20,674
Total revenue				51,071	51,071				20,674	20,674
Expenditures										
Personal services	-	-	-	47,680	47,680	-	-	-	122,562	122,562
Fringe	-	-	-	15,003	15,003	-	-	-	29,416	29,416
Travel	-	-	-	2,283	2,283	-	-	-	(390)	(390)
Supplies	-	-	-	292	292	-	-	-	44,982	44,982
Contractual	-	-	-	-	-	-	-	-	-	-
Tuition assistance	-	-	-	-	-	-	-	-	10,753	10,753
Freight	-	-	-	-	-	-	-	-	-	-
Administrative fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	1,749	1,749	-	-	-	22,611	22,611
Facilities	-	-	-	-	-	-	-	-	-	-
Equipment									12,345	12,345
Total expenses				67,007	67,007				242,279	242,279
Excess (deficiency) of revenues										
over (under) expenditures	-	-	-	(15,936)	(15,936)	-	-	-	(221,605)	(221,605)
Transfers				(110,147)	(110,147)					
Net Change in Fund Balances	-	-	-	(126,083)	(126,083)	-	-	-	(221,605)	(221,605)
Fund Balances - June 30, 2019	2,000,000	2,000,000		2,596,682	6,596,682	2,000,000	2,006,799		1,813,129	5,819,928
Fund Balances - June 30, 2020	\$ 2,000,000	\$ 2,000,000	\$ -	\$ 2,470,599	\$ 6,470,599	\$ 2,000,000	\$ 2,006,799	\$ -	\$ 1,591,524	\$ 5,598,323

^{*} Collaborative Center

CLEMSON UNIVERSITY

			Cyber-institute				Su	stainable Develop	ment	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Other contribution revenue										-
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	71,123	71,123	-	-	-	154,821	154,821
Unrealized gain (loss)	-	-	-	(52,806)	(52,806)	-	-	-	(116,468)	(116,468)
Endowment income	-	-	-	4,702	4,702	-	-	-	6,088	6,088
Total investment income (loss)				23,019	23,019				44,441	44,441
Total revenue				23,019	23,019				44,441	44,441
Expenditures										
Personal services	_	_	_	99,404	99,404	_	_	_	139,367	139,367
Fringe	_	_	_	22,379	22,379	_	_	_	48,124	48,124
Travel	_	_	-	4,032	4,032	_	_	_	24,620	24,620
Supplies	_	_	-	-	-	_	_	_	3,094	3,094
Contractual	_	_	-	_	-	_	_	_	-	-
Tuition assistance	_	_	_	_	-	_	_	_	8,230	8,230
Freight	_	_	_	_	-	_	_	_	-	-
Administrative fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	14,568	14,568	-	-	-	11,900	11,900
Facilities	-	-	-	· -		-	-	-	-	· -
Equipment	-	-	-	-	-	-	-	-	2,576	2,576
Total expenses	-			140,383	140,383				237,911	237,911
Excess (deficiency) of revenues										
over (under) expenditures	-	-	-	(117,364)	(117,364)	-	-	-	(193,470)	(193,470)
Transfers										
Net Change in Fund Balances	-	-	-	(117,364)	(117,364)	-	-	-	(193,470)	(193,470)
Fund Balances - June 30, 2019	2,000,000	1,150,001		1,993,861	5,143,862	4,000,000	3,011,458		4,033,807	11,045,265
Fund Balances - June 30, 2020	\$ 2,000,000	\$ 1,150,001	\$ -	\$ 1,876,497	\$ 5,026,498	\$ 4,000,000	\$ 3,011,458	\$ -	\$ 3,840,337	\$ 10,851,795

CLEMSON UNIVERSITY

		Du	ıke Energy Smart	Grid				Senior Smart *		
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Other contribution revenue										<u>-</u>
Total contribution revenue		<u> </u>		<u> </u>				<u> </u>		
Investment Income										
Realized gain (loss)	-	-	-	81,355	81,355	-	-	-	_	-
Unrealized gain (loss)	-	-	-	(62,836)	(62,836)	-	-	-	-	-
Endowment income	-	-	-	5,235	5,235	-	-	-	-	-
Total investment income (loss)				23,754	23,754					
Total revenue				23,754	23,754					
Expenditures										
Personal services	_	_	_	27,062	27,062	_	_	_	27,083	27,083
Fringe	_	-	_	9,999	9,999	_	_	_	6,365	6,365
Travel	_	_	_	13,799	13,799	_	_	_	-	-
Supplies	-	-	-	14,611	14,611	-	-	-	-	-
Contractual	-	-	-	· -	-	-	-	-	-	-
Tuition assistance	-	-	-	-	-	-	-	-	-	-
Freight	-	-	-	-	-	-	-	-	-	-
Administrative fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	8,870	8,870	-	-	-	4,743	4,743
Facilities	-	-	-	-	-	-	-	-	-	-
Equipment		<u> </u>		<u> </u>				<u>-</u> _		<u>-</u> _
Total expenses	-			74,341	74,341				38,191	38,191
Excess (deficiency) of revenues										
over (under) expenditures	-	-	-	(50,587)	(50,587)	-	-	-	(38,191)	(38,191)
Transfers									100,817	100,817
Net Change in Fund Balances	-	-	-	(50,587)	(50,587)	-	-	-	62,626	62,626
Fund Balances - June 30, 2019	2,000,000	2,000,000		1,475,904	5,475,904				529,271	529,271
Fund Balances - June 30, 2020	\$ 2,000,000	\$ 2,000,000	\$ -	\$ 1,425,317	\$ 5,425,317	\$ -	\$ -	\$ -	\$ 591,897	\$ 591,897

^{*} Collaborative Center-USC Fiscal Agent

CLEMSON UNIVERSITY

			Advan	ced Tissue Biofa	brication*			Re	egenerative Medic	ine *	
	State	Non-	-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endo	wment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue											
State funds	\$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds		-	-	-	-	-	-	-	-	-	-
Other contribution revenue		-	-	-	-	-	-	-	-	32,165	32,165
Total contribution revenue							<u> </u>			32,165	32,165
Investment Income											
Realized gain (loss)		_	-	-	-	-	-	-	-	42,338	42,338
Unrealized gain (loss)		•	-	-	-	-	-	-	-	(40,747)	(40,747)
Endowment income		-	-	-		-	-	-	-	(2,933)	(2,933)
Total investment income (loss)			-							(1,342)	(1,342)
Total revenue		<u> </u>								30,823	30,823
Expenditures											
Personal services		_	_	_	80,741	80,741	_	_	_	96,818	96,818
Fringe		_	_	_	29,516	29,516	_	_	_	31,388	31,388
Travel		_	_	_	9,143	9,143	_	_	_	5,267	5,267
Supplies		_	_	_	14,882	14,882	_	_	_	14,184	14,184
Contractual		_	_	_	-	-	_	-	_	, · -	-
Tuition assistance		_	-	-	-	-	-	-	-	-	-
Freight		_	-	-	-	-	-	-	-	-	-
Administrative fees		-	-	-	-	-	-	-	-	-	-
Other		-	-	-	8,375	8,375	-	-	-	545	545
Facilities		-	-	-	-	-	-	-	-	-	-
Equipment		-	-	-	-	-	-	-	-	23,729	23,729
Total expenses		=	-		142,657	142,657			<u> </u>	171,931	171,931
Excess (deficiency) of revenues											
over (under) expenditures		-	-	-	(142,657)	(142,657)	-	-	-	(141,108)	(141,108)
Transfers					64,345	64,345				79,384	79,384
Net Change in Fund Balances		-	-	-	(78,312)	(78,312)	-	-	-	(61,724)	(61,724)
Fund Balances - June 30, 2019		<u> </u>			69,528	69,528		2,000,000		939,667	2,939,667
Fund Balances - June 30, 2020	\$	- \$		\$ -	\$ (8,784)	\$ (8,784)	\$ -	\$ 2,000,000	\$ -	\$ 877,943	\$ 2,877,943

^{*} Collaborative Center-MUSC Fiscal Agent

^{*} Collaborative Center-MUSC Fiscal Agent

CLEMSON UNIVERSITY

		Tot	al - Clemson Univ	ersity	
	State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue					
State funds	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	· .	2,000	-	_	2,000
Other contribution revenue	_	_,000	_	32,165	32,165
Total contribution revenue		2,000		32,165	34,165
Investment Income					
Realized gain (loss)	_	_	_	1,778,163	1,778,163
Unrealized gain (loss)	_	_	_	(1,346,818)	(1,346,818)
Endowment income	_	_	_	71,912	71,912
Total investment income (loss)				503,257	503,257
rotal invocation income (1665)				000,207	000,201
Total revenue		2,000		535,422	537,422
Expenditures					
Personal services	-	-	-	2,459,716	2,459,716
Fringe	-	-	-	794,018	794,018
Travel	-	-	-	139,092	139,092
Supplies	-	-	-	158,975	158,975
Contractual	_	_	_	-	-
Tuition assistance	_	_	_	35,966	35,966
Freight	_	_	_	-	-
Administrative fees	_	_	_	_	_
Other	_	_	_	294,050	294,050
Facilities				198,254	198,254
Equipment	-	-	-	175,361	175,361
Total expenses				4,255,432	4,255,432
Total expenses				4,255,452	4,233,432
Excess (deficiency) of revenues					
over (under) expenditures	-	2,000	-	(3,720,010)	(3,718,010)
Transfers				134,399	134,399
Net Change in Fund Balances	-	2,000	-	(3,585,611)	(3,583,611)
Fund Balances - June 30, 2019	43,000,000	37,780,721	155,980	43,108,313	124,045,014
Fund Balances - June 30, 2020	\$ 43,000,000	\$ 37,782,721	\$ 155,980	\$ 39,522,702	\$ 120,461,403

MEDICAL UNIVERSITY OF SOUTH CAROLINA

			Proteomics					Neurosciences		
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	670	-	670
Total contribution revenue								670		670
Investment Income										
Realized gain (loss)	-	-	-	(156,904)	(156,904)	-	-	-	(122,163)	(122,163)
Unrealized gain (loss)	-	-	-	38,214	38,214	-	-	-	30,106	30,106
Endowment income	-	-	-	50,522	50,522	-	-	-	39,112	39,112
Total investment income (loss)				(68,168)	(68,168)				(52,945)	(52,945)
Total revenue				(68,168)	(68,168)			670	(52,945)	(52,275)
Expenditures										
Personal services	-	-	-	(2,227)	(2,227)	-	-	-	63,505	63,505
Fringe	-	-	-	870	870	-	-	-	25,910	25,910
Travel	-	-	-	16,835	16,835	-	-	-	-	-
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	50,295	50,295	-	-	-	-	-
Contractual	-	-	-	73,347	73,347	-	-	-	-	-
Management Fees	-	-	-	60,520	60,520	-	-	33	46,777	46,810
Other	-	-	-	6,377	6,377	-	-	-	(4,956)	(4,956)
Fixed Charges	-	-	-	16,027	16,027	-	-	-	-	-
Professional & Other Fees	-	-	-	7,508	7,508	-	-	-	-	-
Equipment	-	-	-	39,596	39,596	-	-	-	-	-
Total expenditures				269,148	269,148			33	131,236	131,269
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(337,316)	(337,316)	-	-	637	(184,181)	(183,544)
Transfers			(192,453)	192,453	<u> </u>			(350)	350	
Net Change in Fund Balances	-	-	(192,453)	(144,863)	(337,316)	-	-	287	(183,831)	(183,544)
Fund Balances - June 30, 2019	4,000,000	1,254,266	192,453	1,005,610	6,452,329	3,000,000	900,350	666,570	1,279,280	5,846,200
Fund Balances - June 30, 2020	\$ 4,000,000	\$ 1,254,266	¢	\$ 860,747	\$ 6,115,013	\$ 3.000.000	\$ 900,350	\$ 666.857	\$ 1.095.449	\$ 5,662,656

MEDICAL UNIVERSITY OF SOUTH CAROLINA

			Marine Genomic	s				egenerative Medic	ine*	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	707	707
Total contribution revenue			-						707	707
Investment Income										
Realized gain (loss)	-	-	-	(87,135)	(87,135)	-	-	-	(156,069)	(156,069)
Unrealized gain (loss)	-	-	-	175,369	175,369	-	-	-	38,685	38,685
Endowment income				35,269	35,269				49,968	49,968
Total investment income (loss)				123,503	123,503	<u> </u>			(67,416)	(67,416)
Total revenue				123,503	123,503				(66,709)	(66,709)
Expenditures										
Personal services	-	-	-	51,323	51,323	-	-	-	44,005	44,005
Fringe	-	-	-	21,130	21,130	-	-	-	17,372	17,372
Travel	-	-	-	-	-	-	-	-	-	-
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	-	-	-	-	-	651	651
Contractual	=	-	-	-	-	-	-	-	2,889	2,889
Management Fees	-	-	-	75,168	75,168	-	-	-	59,744	59,744
Other	-	-	-	111,520	111,520	-	-	-	-	-
Fixed Charges	-	-	-	-	-	-	-	-	-	-
Professional & Other Fees	-	-	-	-	-	-	-	-	-	-
Equipment									<u> </u>	
Total expenditures	<u> </u>		-	259,141	259,141				124,661	124,661
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(135,638)	(135,638)	-	-	-	(191,370)	(191,370)
Transfers	<u> </u>								(158,767)	(158,767)
Net Change in Fund Balances	-	-	-	(135,638)	(135,638)	-	-	-	(350,137)	(350,137)
Fund Balances - June 30, 2019	1,500,000	4,000,000		1,846,093	7,346,093	5,000,000			1,139,103	6,139,103
Fund Balances - June 30, 2020	\$ 1,500,000	\$ 4,000,000	\$ -	\$ 1,710,455	\$ 7,210,455	\$ 5,000,000	\$ -	\$ -	\$ 788,966	\$ 5,788,966

^{*} Collaborative Center

MEDICAL UNIVERSITY OF SOUTH CAROLINA

			tional Cancer The					ug Discovery in Ca		
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Total contribution revenue										-
Investment Income										
Realized gain (loss)	-	-	-	(210,834)	(210,834)	-	-	-	(194,969)	(194,969)
Unrealized gain (loss)	-	-	-	51,812	51,812	-	-	-	47,722	47,722
Endowment income	-	-	-	67,694	67,694	-	-	-	62,680	62,680
Total investment income (loss)				(91,328)	(91,328)				(84,567)	(84,567)
Total revenue				(91,328)	(91,328)				(84,567)	(84,567)
Expenditures										
Personal services	-	-	-	169,356	169,356	-	-	-	133,152	133,152
Fringe	-	-	-	69,097	69,097	-	-	-	54,328	54,328
Travel	-	-	-	-	-	-	-	-	7,075	7,075
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	57,306	57,306	-	-	-	34,419	34,419
Contractual	-	-	-	-	-	-	-	-	-	-
Management Fees	-	-	-	-	-	-	-	-	75,031	75,031
Other	-	-	-	-	-	-	-	-	17,552	17,552
Fixed Charges	-	-	-	-	-	-	-	-	1,336	1,336
Professional & Other Fees	-	-	-	-	-	-	-	-	4,951	4,951
Equipment	<u>-</u> _			23,680	23,680				62,606	62,606
Total expenditures				319,439	319,439				390,450	390,450
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(410,767)	(410,767)	-	-	-	(475,017)	(475,017)
Transfers				(116,214)	(116,214)				(60,115)	(60,115
Net Change in Fund Balances	-	-	-	(526,981)	(526,981)	-	-	-	(535,132)	(535,132
Fund Balances - June 30, 2019	5,000,000	1,998,095		1,601,780	8,599,875	5,000,000	1,604,510		1,338,065	7,942,575
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 1,998,095	\$ -	\$ 1,074,799	\$ 8,072,894	\$ 5,000,000	\$ 1,604,510	\$ -	\$ 802,933	\$ 7,407,443

^{*} Collaborative Center

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MEDICAL UNIVERSITY OF SOUTH CAROLINA

		Gastroir	ntestinal Cancer D	iagnostics				Vision Science		
	State	Non-state	Non-state	Endowment	_	State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	(207,948)	(207,948)	-	-	-	(186,599)	(186,599)
Unrealized gain (loss)	-	-	-	50,623	50,623	-	-	-	45,037	45,037
Endowment income	<u>-</u>			66,969	66,969				60,119	60,119
Total investment income (loss)				(90,356)	(90,356)				(81,443)	(81,443)
Total revenue				(90,356)	(90,356)				(81,443)	(81,443)
Expenditures										
Personal services	-	-	-	333,245	333,245	-	-	-	53,067	53,067
Fringe	-	-	-	134,414	134,414	-	-	-	21,651	21,651
Travel	-	-	-	-	-	-	-	-	2,559	2,559
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	40,509	40,509	-	-	-	19,480	19,480
Contractual	-	-	-	1,680	1,680	-	-	-	1,200	1,200
Management Fees	-	-	-	80,225	80,225	-	-	-	72,657	72,657
Other	-	-	-	-	-	-	-	-	2,046	2,046
Fixed Charges	-	-	-	-	-	-	-	-	-	-
Professional & Other Fees	-	-	-	-	-	-	-	-	-	-
Equipment									507	507
Total expenditures				590,073	590,073			<u> </u>	173,167	173,167
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(680,429)	(680,429)	-	-	-	(254,610)	(254,610)
Transfers										
Net Change in Fund Balances	-	-	-	(680,429)	(680,429)	-	-	-	(254,610)	(254,610)
Fund Balances - June 30, 2019	5,000,000	2,000,000	477,955	1,771,850	9,249,805	4,500,000	1,883,774	453,979	2,409,015	9,246,768
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 2,000,000	\$ 477,955	\$ 1,091,421	\$ 8,569,376	\$ 4,500,000	\$ 1,883,774	\$ 453,979	\$ 2,154,405	\$ 8,992,158

SOUTH CAROLINA CENTERS OF ECONOMIC EXCELLENCE MEDICAL UNIVERSITY OF SOUTH CAROLINA

	State		fectiveness and Pa		_	State		in Cardiovascular	Endowment	
	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	_	_	_	_		_	_	_	_	
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	(209,029)	(209,029)	-	_	-	(240,785)	(240,785)
Unrealized gain (loss)	-	-	-	51,193	51,193	-	-	-	58,655	58,655
Endowment income	-	-	-	67,186	67,186	-	-	-	77,524	77,524
Total investment income (loss)				(90,650)	(90,650)				(104,606)	(104,606
Total revenue				(90,650)	(90,650)				(104,606)	(104,606
Expenditures										
Personal services	-	-	-	139,473	139,473	-	-	-	227,650	227,650
Fringe	-	-	-	55,669	55,669	-	-	-	92,064	92,064
Travel	-	-	-	4,791	4,791	-	-	-	1,921	1,921
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	3,955	3,955	-	-	-	872	872
Contractual	-	-	-	-	-	-	-	-	-	-
Management Fees	-	-	-	80,419	80,419	-	-	-	92,865	92,865
Other	-	-	-	-	-	-	-	456	(69)	387
Fixed Charges	-	-	-	-	-	-	-	-	-	-
Professional & Other Fees	-	-	-	760	760	-	-	-	3,203	3,203
Equipment										
Total expenditures				285,067	285,067			456	418,506	418,962
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(375,717)	(375,717)	-	-	(456)	(523,112)	(523,568)
Transfers				(69,042)	(69,042)				41,548	41,548
Net Change in Fund Balances	-	-	-	(444,759)	(444,759)	-	-	(456)	(481,564)	(482,020
Fund Balances - June 30, 2019	5,000,000	2,000,000		1,295,754	8,295,754	5,000,000	3,518,805	1,195,354	1,256,036	10,970,195
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 2.000.000		\$ 850,995	\$ 7,850,995	\$ 5.000.000	\$ 3,518,805	\$ 1.194.898	\$ 774,472	\$ 10.488.175

^{*} Collaborative Center

SOUTH CAROLINA CENTERS OF ECONOMIC EXCELLENCE MEDICAL UNIVERSITY OF SOUTH CAROLINA

			acco-related Malig					Stroke*		
	State	Non-state	Non-state	Endowment	T 1	State	Non-state	Non-state	Endowment	T
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	11,758	-	11,758	-	-	-	-	-
Total contribution revenue			11,758		11,758					
Investment Income										
Realized gain (loss)	-	-	-	(216,849)	(216,849)	-	-	-	(229,021)	(229,021
Unrealized gain (loss)	-	-	-	52,910	52,910	-	-	-	56,135	56,135
Endowment income	-	-	-	69,839	69,839	-	-	-	73,460	73,460
Total investment income (loss)				(94,100)	(94,100)				(99,426)	(99,426
Total revenue			11,758	(94,100)	(82,342)				(99,426)	(99,426
Expenditures										
Personal services	-	-	-	132,818	132,818	-	-	-	111,414	111,414
Fringe	-	-	-	54,273	54,273	-	-	-	46,021	46,021
Travel	-	-	-	420	420	-	-	-	-	-
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	1,356	1,356	-	-	-	141	141
Contractual	-	-	3,156	-	3,156	-	-	-	519	519
Management Fees	-	-	588	83,663	84,251	-	-	-	85,923	85,923
Other	-	-	-	-	-	-	-	-	-	-
Fixed Charges	-	-	-	-	-	-	-	-	-	-
Professional & Other Fees	-	-	-	-	-	-	-	-	-	-
Equipment										
Total expenditures			3,744	272,530	276,274				244,018	244,018
Excess (deficiency) of revenues over										
(under) expenditures	-	-	8,014	(366,630)	(358,616)	-	-	-	(343,444)	(343,444
Transfers									(105,531)	(105,531
Net Change in Fund Balances	-	-	8,014	(366,630)	(358,616)	-	-	-	(448,975)	(448,975
Fund Balances - June 30, 2019	5,000,000	1,671,812	894,365	3,091,222	10,657,399	5,000,000	2,500,000	174,131	1,917,534	9,591,665
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 1,671,812	\$ 902.379	\$ 2,724,592	\$ 10,298,783	\$ 5.000.000	\$ 2.500.000	\$ 174.131	\$ 1,468,559	\$ 9,142,690

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MEDICAL UNIVERSITY OF SOUTH CAROLINA

		Re	enal Disease Biom	arker			Cancer S	tem Cell Biology a	nd Therany	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,500	\$ 2,500
Non-state matching funds	-	-	-	-	-	-	-	-	1,200	1,200
Total contribution revenue									3,700	3,700
Investment Income										
Realized gain (loss)	-	-	-	(185,769)	(185,769)	-	-	-	(206,607)	(206,607)
Unrealized gain (loss)	-	-	-	45,237	45,237	-	-	-	50,528	50,528
Endowment income	-	-	-	59,819	59,819	-	-	-	66,473	66,473
Total investment income (loss)				(80,713)	(80,713)				(89,606)	(89,606)
Total revenue				(80,713)	(80,713)				(85,906)	(85,906)
Expenditures										
Personal services	-	-	-	224,171	224,171	-	-	-	26,245	26,245
Fringe	-	-	-	90,884	90,884	-	-	-	10,708	10,708
Travel	-	-	-	2,753	2,753	-	-	-	2,673	2,673
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	22,741	22,741	-	-	-	193,042	193,042
Contractual	-	-	-	-	-	-	-	-	-	-
Management fees	-	-	-	71,659	71,659	-	-	-	79,674	79,674
Other	-	-	-	1,106	1,106	-	-	-	39,154	39,154
Fixed Charges	-	-	-	1,144	1,144	-	-	-	635	635
Professional & Other Fees	-	-	-	-	-	-	-	-	1,753	1,753
Equipment	-	-	-	-	-	-	-	-	-	-
Total expenditures				414,458	414,458				353,884	353,884
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(495,171)	(495,171)	-	-	-	(439,790)	(439,790)
Transfers										
Net Change in Fund Balances	-	-	-	(495,171)	(495,171)	-	-	-	(439,790)	(439,790)
Fund Balances - June 30, 2019	5,000,000	1,413,707	1,015,970	1,485,123	8,914,800	5,000,000	1,541,536	555,333	2,412,329	9,509,198
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 1,413,707	\$ 1,015,970	\$ 989,952	\$ 8,419,629	\$ 5,000,000	\$ 1,541,536	\$ 555,333	\$ 1,972,539	\$ 9,069,408

MEDICAL UNIVERSITY OF SOUTH CAROLINA

		Advan	ced Tissue Biofat	rication*			Medic	cation Safety and E	fficacy*	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	(195,846)	(195,846)	-	-	-	(77,131)	(77,131)
Unrealized gain (loss)	-	-	-	48,233	48,233	-	-	-	19,074	19,074
Endowment income	-	-	-	62,836	62,836	-	-	-	24,714	24,714
Total investment income (loss)				(84,777)	(84,777)				(33,343)	(33,343)
Total revenue				(84,777)	(84,777)				(33,343)	(33,343)
Expenditures										
Personal services	-	-	-	70,039	70,039	-	-	-	37,981	37,981
Fringe	-	-	-	28,576	28,576	-	-	-	15,496	15,496
Travel	-	-	-	-	-	-	-	-	-	-
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	-	-	-	-	-	-	-
Contractual	-	-	-	-	-	-	-	-	6,100	6,100
Management Fees	-	-	-	75,153	75,153	-	-	-	29,541	29,541
Other	-	-	-	-	-	-	-	-	-	-
Fixed Charges	-	-	-	-	-	-	-	-	-	-
Professional & Other Fees	-	-	-	-	-	-	-	-	-	-
Equipment									68,845	68,845
Total expenditures	-			173,768	173,768			-	157,963	157,963
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(258,545)	(258,545)	-	-	-	(191,306)	(191,306)
Transfers				(128,691)	(128,691)				(68,695)	(68,695)
Net Change in Fund Balances	-	-	-	(387,236)	(387,236)	-	-	-	(260,001)	(260,001)
Fund Balances - June 30, 2019	5,000,000	1,200,000	75,000	1,776,034	8,051,034	2,000,000	600,000		683,792	3,283,792
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 1,200,000	\$ 75,000	\$ 1,388,798	\$ 7,663,798	\$ 2,000,000	\$ 600,000	\$ -	\$ 423,791	\$ 3,023,791

^{*} Collaborative Center

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SOUTH CAROLINA CENTERS OF ECONOMIC EXCELLENCE MEDICAL UNIVERSITY OF SOUTH CAROLINA

		Pros	state Cancer Dispa	arities*			Lipidomi	cs, Pathobiology a	nd Therapy	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Total contribution revenue							-			
Investment Income										
Realized gain (loss)	-	-	-	(139,906)	(139,906)	-	-	-	(242,435)	(242,435)
Unrealized gain (loss)	-	-	-	34,296	34,296	-	-	-	59,073	59,073
Endowment income	-	-	-	44,887	44,887	-	-	-	78,047	78,047
Total investment income (loss)				(60,723)	(60,723)				(105,315)	(105,315)
Total revenue				(60,723)	(60,723)				(105,315)	(105,315)
Expenditures										
Personal services	-	-	-	68,208	68,208	-	-	-	233,237	233,237
Fringe	-	-	-	27,886	27,886	-	-	-	94,152	94,152
Travel	-	-	_	1,297	1,297	-	-	-	-	-
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	-	-	-	-	-	15,078	15,078
Contractual	-	-	-	402	402	-	-	-	-	-
Management Fees	-	-	-	53,723	53,723	-	-	-	93,490	93,490
Other	-	-	-	473	473	-	-	-	65	65
Fixed Charges	-	-	-	1,362	1,362	-	-	-	1,709	1,709
Professional & Other Fees	-	-	-	1,000	1,000	-	-	-	-	-
Equipment	<u>-</u> _			<u>-</u>				<u> </u>		
Total expenditures				154,351	154,351				437,731	437,731
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(215,074)	(215,074)	-	-	-	(543,046)	(543,046)
Transfers				(64,607)	(64,607)				(41,548)	(41,548)
Net Change in Fund Balances	-	-	-	(279,681)	(279,681)	-	-	-	(584,594)	(584,594)
Fund Balances - June 30, 2019	3,600,000	1,080,000	9,769	1,228,252	5,918,021	5,000,000	3,451,075	23,750	1,368,280	9,843,105
Fund Balances - June 30, 2020	\$ 3,600,000	\$ 1,080,000	\$ 9,769	\$ 948,571	\$ 5,638,340	\$ 5,000,000	\$ 3,451,075	\$ 23,750	\$ 783,686	\$ 9,258,511

^{*} Collaborative Center

MEDICAL UNIVERSITY OF SOUTH CAROLINA

		Inf	lammation and Fib	orosis			Translat	tional Biomedical I	nformatics	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ 250	\$ 250	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	1,100	1,100	-	-	-	-	-
Total contribution revenue				1,350	1,350					
Investment Income										
Realized gain (loss)	-	-	-	(213,406)	(213,406)	-	-	-	(73,683)	(73,683)
Unrealized gain (loss)	-	-	-	51,966	51,966	-	-	-	17,954	17,954
Endowment income	<u></u>			68,692	68,692				23,721	23,721
Total investment income (loss)				(92,748)	(92,748)				(32,008)	(32,008)
Total revenue				(91,398)	(91,398)				(32,008)	(32,008)
Expenditures										
Personal services	-	-	-	142,150	142,150	-	-	-	251,963	251,963
Fringe	-	-	-	55,533	55,533	-	-	-	101,319	101,319
Travel	-	-	-	2,547	2,547	-	-	-	11,845	11,845
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	-	-	-	-	-	290	290
Tuition Assistance	-	-	-	69,925	69,925	-	-	-	-	-
Management Fees	-	-	-	82,340	82,340	-	-	-	28,414	28,414
Other	-	-	-	600	600	-	-	-	-	-
Fixed Charges	-	-	-	63	63	-	-	-	2,000	2,000
Professional & Other Fees	-	-	-	350	350	-	-	-	4,003	4,003
Equipment										
Total expenditures	-			353,508	353,508				399,834	399,834
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(444,906)	(444,906)	-	-	-	(431,842)	(431,842)
Transfers										
Net Change in Fund Balances	-	-	-	(444,906)	(444,906)	-	-	-	(431,842)	(431,842)
Fund Balances - June 30, 2019	4,999,999	2,279,049	161,885	1,590,462	9,031,395	2,000,000	600,000	31,379	668,548	3,299,927
Fund Balances - June 30, 2020	\$ 4,999,999	\$ 2,279,049	\$ 161,885	\$ 1,145,556	\$ 8,586,489	\$ 2,000,000	\$ 600,000	\$ 31,379	\$ 236,706	\$ 2,868,085

MEDICAL UNIVERSITY OF SOUTH CAROLINA

		Health F	Facilities Design a	nd Testing*				Brain Imaging*		
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Total contribution revenue	-			-			-			-
Investment Income										
Realized gain (loss)	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss)	-	-	-	-	-	-	-	-	-	-
Endowment income	-	-	-	-	-	-	-	-	-	-
Total investment income (loss)										
Total revenue										
Expenditures										
Personal services	-	-	-	15,691	15,691	-	-	-	18,397	18,397
Fringe	-	-	-	6,406	6,406	-	-	-	7,506	7,506
Travel	-	-	-	1,441	1,441	-	-	-	4,247	4,247
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	-	-	-	-	-	101	101
Contractual	-	-	-	713	713	-	-	-	-	-
Management Fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Fixed Charges	-	-	-	200	200	-	-	-	-	-
Professional & Other Fees	-	-	-	225	225	-	-	-	580	580
Equipment									37,536	37,536
Total expenditures				24,676	24,676				68,367	68,367
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(24,676)	(24,676)	-	-	-	(68,367)	(68,367)
Transfers				110,147	110,147				112,395	112,395
Net Change in Fund Balances	-	-	-	85,471	85,471	-	-	-	44,028	44,028
Fund Balances - June 30, 2019				306,591	306,591				317,122	317,122
Fund Balances - June 30, 2020	\$ -	\$ -	\$ -	\$ 392,062	\$ 392,062	\$ -	\$ -	\$ -	\$ 361,150	\$ 361,150

^{*} Collaborative Center-Clemson Fiscal Agent

^{*} Collaborative Center-USC Fiscal Agent

MEDICAL UNIVERSITY OF SOUTH CAROLINA

		Child	dhood Neurothera	peutics*				Healthcare Quality	y*	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-state matching funds	-	-	-	-	-	-	-	-	-	-
Total contribution revenue	-				-		-			
Investment Income										
Realized gain (loss)	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss)	-	-	-	-	-	-	-	-	-	-
Endowment income	-	-	-	-	-	-	-	-	-	-
Total investment income (loss)							-			
Total revenue										
Expenditures										
Personal services	-	-	-	26,928	26,928	-	-	-	38,558	38,558
Fringe	-	-	-	10,987	10,987	-	-	-	14,681	14,681
Travel	-	-	-	-	-	-	-	-	-	-
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	39,877	39,877	-	-	-	5,799	5,799
Contractual	-	-	-	-	-	-	-	-	-	-
Management Fees	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	300	300
Fixed Charges	-	-	-	77	77	-	-	-	3,756	3,756
Professional & Other Fees	-	-	-	=	-	-	-	-	-	-
Equipment				74,494	74,494	<u></u>		<u></u> _	1,635	1,635
Total expenditures	-			152,363	152,363		-		64,729	64,729
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(152,363)	(152,363)	-	-	-	(64,729)	(64,729
Transfers				73,606	73,606				100,769	100,769
Net Change in Fund Balances	-	-	-	(78,757)	(78,757)	-	-	-	36,040	36,040
Fund Balances - June 30, 2019				549,095	549,095				276,221	276,221
Fund Balances - June 30, 2020	_\$	\$ -	¢ -	\$ 470,338	\$ 470,338	¢	¢	¢	\$ 312,261	\$ 312,261

^{*} Collaborative Center-USC Fiscal Agent

^{*} Collaborative Center-USC Fiscal Agent

MEDICAL UNIVERSITY OF SOUTH CAROLINA

			Healthful Lifestyl	es*			Total - Med	ical University of S	outh Carolina	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
State funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,750	\$ 2,750
Non-state matching funds	-	-	-	-	-	-	-	12,428	3,007	15,435
Total contribution revenue	-	-					-	12,428	5,757	18,185
Investment Income										
Realized gain (loss)	-	-	-	(15,480)	(15,480)	-	-	-	(3,568,568)	(3,568,568)
Unrealized gain (loss)	-	-	-	3,758	3,758	-	-	-	1,026,580	1,026,580
Endowment income	-	-	-	5,656	5,656	-	-	-	1,155,187	1,155,187
Total investment income (loss)				(6,066)	(6,066)				(1,386,801)	(1,386,801)
Total revenue			<u> </u>	(6,066)	(6,066)			12,428	(1,381,044)	(1,368,616)
Expenditures										
Personal services	-	-	-	36,499	36,499	-	-	-	2,646,848	2,646,848
Fringe	-	-	-	14,472	14,472	-	-	-	1,071,405	1,071,405
Travel	-	-	-	312	312	-	-	-	60,716	60,716
Subrecipients	-	-	-	-	-	-	-	-	-	-
Supplies	-	-	-	-	-	-	-	-	485,912	485,912
Contractual	-	-	-	1,000	1,000	-	-	3,156	157,775	160,931
Management Fees	-	-	-	5,957	5,957	-	-	621	1,332,943	1,333,564
Other	-	-	-	120	120	-	-	456	174,288	174,744
Fixed Charges	-	-	-	2,197	2,197	-	-	-	30,506	30,506
Professional & Other Fees	-	-	-	475	475	-	-	-	24,808	24,808
Equipment	-	-	-	-	-	-	-	-	308,899	308,899
Total expenditures			-	61,032	61,032			4,233	6,294,100	6,298,333
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(67,098)	(67,098)	-	-	8,195	(7,675,144)	(7,666,949)
Transfers				48,820	48,820			(192,803)	(133,122)	(325,925)
Net Change in Fund Balances	-	-	-	(18,278)	(18,278)	-	-	(184,608)	(7,808,266)	(7,992,874)
Fund Balances - June 30, 2019				686,070	686,070	85,599,999	35,496,979	5,927,893	33,299,261	160,324,132
Fund Balances - June 30, 2020	\$ -	\$ -	\$ -	\$ 667,792	\$ 667,792	\$ 85,599,999	\$ 35,496,979	\$ 5,743,285	\$ 25,490,995	\$ 152,331,258

^{*} Collaborative Center-USC Fiscal Agent

UNIVERSITY OF SOUTH CAROLINA

			Nanostructures	3				Brain Imaging*		
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other contributions/revenue									45,638	45,638
Total contribution revenue									45,638	45,638
Investment Income										
Realized gain (loss)	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss)	-	-	-	138,303	138,303	-	-	-	172,879	172,879
Endowment income	-	-	-	34,001	34,001	-	-	-	33,069	33,069
Total investment income (loss)	-		-	172,304	172,304			-	205,948	205,948
Total revenue				172,304	172,304				251,586	251,586
Expenditures										
Personal services	-	-	_	4,500	4,500	-	-	-	77,459	77,459
Fringe	_	_	_	27	27	_	_	_	19,650	19,650
Travel	_	_	_	567	567	_	_	_	2,575	2,575
Supplies	-	_	_	171	171	_	_	_	10,758	10,758
Tuition assistance	_	_	_	_	-	_	_	_	-	-
Administrative fees	-	-	_	19,972	19,972	-	-	_	45,638	45,638
Other	-	-	_	· -	•	-	-	-	25,839	25,839
Equipment	-	-	_	_	-	-	-	-	· -	
Total expenditures				25,237	25,237				181,919	181,919
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	147,067	147,067	-	-	-	69,667	69,667
Transfers									(112,395)	(112,395)
Net Change in Fund Balances	-	-	-	147,067	147,067	-	-	-	(42,728)	(42,728)
Fund Balances - June 30, 2019	4,000,000	1,631,274		959,967	6,591,241	5,000,000	2,102,769		459,489	7,562,258
Fund Balances - June 30, 2020	\$ 4,000,000	\$ 1,631,274	\$ -	\$ 1,107,034	\$ 6,738,308	\$ 5,000,000	\$ 2,102,769	\$ -	\$ 416,761	\$ 7,519,530

^{*} Collaborative Center

UNIVERSITY OF SOUTH CAROLINA

		Po	lymer Nanocompo	osites			Hydrogen I	Fuel Cell Economy	y (Innovation)	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ 2,300	\$ -	\$ 38,242	\$ 40,542	\$ -	\$ -	\$ -	\$ -	\$ -
Other contributions/revenue	-	-	500	-	500	-	-	-	-	-
Total contribution revenue		2,300	500	38,242	41,042					
Investment Income										
Realized gain (loss)	_	_	_	_	-	_	_	_	_	-
Unrealized gain (loss)	_	_	-	121,015	121,015	_	-	_	172,879	172,879
Endowment income	-	-	-	21,222	21,222	-	_	_	89,547	89,547
Total investment income (loss)				142,237	142,237				262,426	262,426
Total revenue		2,300	500	180,479	183,279				262,426	262,426
Expenditures										
Personal services	-	-	-	57,727	57,727	-	-	-	145,376	145,376
Fringe	-	-	-	19,870	19,870	-	-	-	39,631	39,631
Travel	-	-	2,256	8,552	10,808	-	-	-	805	805
Supplies	-	-	-	17,210	17,210	-	-	-	5,888	5,888
Tuition assistance	-	-	-	13,679	13,679	-	-	-	-	-
Administrative fees	-	-	-	20,247	20,247	-	-	-	20,600	20,600
Other	-	-	-	22,968	22,968	-	-	-	41,534	41,534
Equipment									485	485
Total expenditures			2,256	160,253	162,509				254,319	254,319
Excess (deficiency) of revenues over (under) expenditures	-	2,300	(1,756)	20,226	20,770	-	-	-	8,107	8,107
Transfers										
Net Change in Fund Balances	-	2,300	(1,756)	20,226	20,770	-	-	-	8,107	8,107
Fund Balances - June 30, 2019	3,500,000	1,443,962	16,037	273,490	5,233,489	5,000,000	1,500,000		1,905,323	8,405,323
Fund Balances - June 30, 2020	\$ 3,500,000	\$ 1,446,262	\$ 14,281	\$ 293,716	\$ 5,254,259	\$ 5,000,000	\$ 1,500,000	\$ -	\$ 1,913,430	\$ 8,413,430

UNIVERSITY OF SOUTH CAROLINA

		Tourism	and Economic De	evelopment			F	Renewable Fuel C	ells	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other contributions/revenue										
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	_	-	-	-	_	_	-
Unrealized gain (loss)	-	-	-	69,152	69,152	_	-	-	103,728	103,728
Endowment income	-	-	-	17,956	17,956	-	_	_	19,818	19,818
Total investment income (loss)				87,108	87,108				123,546	123,546
Total revenue				87,108	87,108				123,546	123,546
Expenditures										
Personal services	_	-	-	54,557	54,557	_	_	-	142,469	142,469
Fringe	_	-	-	11,444	11,444	_	-	_	7,457	7,457
Travel	_	-	-	14,946	14,946	_	_	-	20,886	20,886
Supplies	-	-	-	1,171	1,171	-	-	-	42,699	42,699
Tuition assistance	-	-	-	11,300	11,300	-	-	-	35,274	35,274
Administrative fees	-	-	-	13,285	13,285	-	-	-	18,941	18,941
Other	-	-	-	2,047	2,047	-	-	-	2,318	2,318
Equipment	-	-	-	-	-	-	-	-	927	927
Total expenditures				108,750	108,750				270,971	270,971
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(21,642)	(21,642)	-	-	-	(147,425)	(147,425)
Transfers										
Net Change in Fund Balances	-	-	-	(21,642)	(21,642)	-	-	-	(147,425)	(147,425)
Fund Balances - June 30, 2019	2,000,000	1,170,000	87	334,695	3,504,782	3,000,000	1,200,000		336,818	4,536,818
Fund Balances - June 30, 2020	\$ 2,000,000	\$ 1,170,000	\$ 87	\$ 313,053	\$ 3,483,140	\$ 3,000,000	\$ 1,200,000	\$ -	\$ 189,393	\$ 4,389,393

UNIVERSITY OF SOUTH CAROLINA

		S	Solid Oxide Fuel C	ells			Child	hood Neurotherag	eutics*	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	-
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 79,061	\$ 79,061
Other contributions/revenue	-	-	-	_		-	_	-	97,831	97,831
Total contribution revenue		-	-		-	_			176,892	176,892
Investment Income										
Realized gain (loss)	_	_	_	_	_	_	_	_	_	_
Unrealized gain (loss)	_	_	_	131,388	131,388	_	_	_	212,780	212,780
Endowment income	_	_	-	19,350	19,350	_	_	_	1,480	1,480
Total investment income (loss)		-	-	150,738	150,738				214,260	214,260
Total revenue				150,738	150,738				391,152	391,152
Expenditures										
Personal services	_	_	-	74,356	74,356	_	_	_	426,242	426,242
Fringe	-	-	-	13,210	13,210	-	_	-	79,499	79,499
Travel	-	_	-	8,195	8,195	-	-	-	2,698	2,698
Supplies	-	-	-	2,376	2,376	-	-	-	27,201	27,201
Tuition assistance	-	-	-	-	· -	-	-	-	-	
Administrative fees	-	-	-	1,515	1,515	-	-	-	38,136	38,136
Other	-	-	-	5,489	5,489	-	-	-	33,400	33,400
Equipment	-	-	-	28,817	28,817	-	-	-	-	-
Total expenditures	<u> </u>			133,958	133,958				607,176	607,176
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	16,780	16,780	-	-	-	(216,024)	(216,024)
Transfers									(73,606)	(73,606)
Net Change in Fund Balances	-	-	-	16,780	16,780	-	-	-	(289,630)	(289,630)
Fund Balances - June 30, 2019	3,000,000	900,000		447,434	4,347,434	5,000,000	2,502,066		1,060,390	8,562,456
Fund Balances - June 30, 2020	\$ 3,000,000	\$ 900,000	\$ -	\$ 464,214	\$ 4,364,214	\$ 5,000,000	\$ 2,502,066	\$ -	\$ 770,760	\$ 8,272,826

^{*} Collaborative Center

UNIVERSITY OF SOUTH CAROLINA

	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other contributions/revenue				135,621	135,621					
Total contribution revenue				135,621	135,621					
Investment Income										
Realized gain (loss)	-	-	-	-	-	-	-	-	-	_
Unrealized gain (loss)	-	-	-	172,879	172,879	-	-	-	211,351	211,351
Endowment income	-	-	7,335	24,017	31,352	-	-	-	13,953	13,953
Total investment income (loss)			7,335	196,896	204,231				225,304	225,304
Total revenue			7,335	332,517	339,852				225,304	225,304
Expenditures										
Personal services	-	-	112,341	200,610	312,951	-	-	-	115,994	115,994
Fringe	-	-	23,281	62,215	85,496	-	-	-	15,382	15,382
Travel	-	-	545	5,391	5,936	-	-	-	12,402	12,402
Supplies	-	-	1,086	4,574	5,660	-	-	2,717	2,965	5,682
Tuition assistance	-	-	-	7,204	7,204	-	-	-	15,533	15,533
Administrative fees	-	-	-	22,005	22,005	-	-	-	33,848	33,848
Other	-	-	167,643	105,514	273,157	-	-	11,858	2,322	14,180
Equipment			(193)	3,922	3,729				9,062	9,062
Total expenditures			304,703	411,435	716,138			14,575	207,508	222,083
Excess (deficiency) of revenues over (under) expenditures		-	(297,368)	(78,918)	(376,286)	-	-	(14,575)	17,796	3,221
Transfers									<u> </u>	
Net Change in Fund Balances	-	-	(297,368)	(78,918)	(376,286)	-	-	(14,575)	17,796	3,221
Fund Balances - June 30, 2019	5,000,000	1,500,000	1,096,911	421,387	8,018,298	5,000,000	2,515,000	15,813	1,370,678	8,901,491
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 1,500,000	\$ 799,543	\$ 342,469	\$ 7,642,012	\$ 5,000,000	\$ 2,515,000	\$ 1,238	\$ 1,388,474	\$ 8,904,712

UNIVERSITY OF SOUTH CAROLINA

			Healthcare Qualit	:y*			Se	enior SMART [™] Ce	enter*	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ 124,394	\$ 124,394	\$ -	\$ -	\$ -	\$ -	\$ -
Other contributions/revenue	-	-	-	41,093	41,093	-	-	-	35,502	35,502
Total contribution revenue			-	165,487	165,487		-	-	35,502	35,502
Investment Income										
Realized gain (loss)	-	-	_	_	-	-	_	_	_	-
Unrealized gain (loss)	_	_	_	172,879	172,879	_	-	-	172,879	172,879
Endowment income	-	-	-	33,040	33,040	-	_	_	35,342	35,342
Total investment income (loss)				205,919	205,919				208,221	208,221
Total revenue				371,406	371,406				243,723	243,723
Expenditures										
Personal services	-	-	-	107,975	107,975	-	-	-	146,193	146,193
Fringe	-	-	-	16,209	16,209	-	-	-	39,174	39,174
Travel	-	-	-	62,717	62,717	-	-	-	12,984	12,984
Supplies	-	-	-	17,286	17,286	-	-	-	13,052	13,052
Tuition assistance	-	-	-	54,450	54,450	-	-	-	2,478	2,478
Administrative fees	-	-	-	29,373	29,373	-	-	-	26,835	26,835
Other	-	-	-	52,228	52,228	-	-	-	48,762	48,762
Equipment	-	-	-	5,009	5,009	-	-	-	37,950	37,950
Total expenditures				345,247	345,247				327,428	327,428
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	26,159	26,159	-	-	-	(83,705)	(83,705)
Transfers				(100,769)	(100,769)				(100,817)	(100,817)
Net Change in Fund Balances	-	-	-	(74,610)	(74,610)	-	-	-	(184,522)	(184,522)
Fund Balances - June 30, 2019	5,000,000	2,000,000		938,072	7,938,072	5,000,000	2,000,000	24,472	728,257	7,752,729
Fund Balances - June 30, 2020	\$ 5,000,000	\$ 2,000,000	\$ -	\$ 863,462	\$ 7,863,462	\$ 5,000,000	\$ 2,000,000	\$ 24,472	\$ 543,735	\$ 7,568,207

^{*} Collaborative Center

^{*} Collaborative Center

UNIVERSITY OF SOUTH CAROLINA

		Nanoenvironme	ntal Research and	d Risk Assessmer	nt		Nuc	lear Science and I	Energy	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other contributions/revenue				50,711	50,711					
Total contribution revenue				50,711	50,711					
Investment Income										
Realized gain (loss)	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss)	-	-	-	103,728	103,728	-	-	-	103,728	103,728
Endowment income	-	-	-	17,884	17,884	-	-	-	14,233	14,233
Total investment income (loss)			-	121,612	121,612				117,961	117,961
Total revenue				172,323	172,323				117,961	117,961
Expenditures										
Personal services	-	-	-	93,453	93,453	-	-	-	126,687	126,687
Fringe	-	-	-	19,919	19,919	-	-	-	14,767	14,767
Travel	-	-	-	15,983	15,983	-	-	-	5,623	5,623
Supplies	-	-	-	7,784	7,784	-	-	-	729	729
Tuition assistance	-	-	-	4,460	4,460	-	-	-	-	-
Administrative fees	-	-	-	15,879	15,879	-	-	-	13,317	13,317
Other	-	-	-	10,261	10,261	-	-	-	7,618	7,618
Equipment										
Total expenditures				167,739	167,739				168,741	168,741
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	4,584	4,584	-	-	-	(50,780)	(50,780)
Transfers										
Net Change in Fund Balances	-	-	-	4,584	4,584	-	-	-	(50,780)	(50,780)
Fund Balances - June 30, 2019	3,000,000	1,000,000		368,531	4,368,531	3,000,000	905,000		358,643	4,263,643
Fund Balances - June 30, 2020	\$ 3,000,000	\$ 1,000,000	s -	\$ 373,115	\$ 4,373,115	\$ 3,000,000	\$ 905,000	\$ -	\$ 307,863	\$ 4,212,863

SOUTH CAROLINA CENTERS OF ECONOMIC EXCELLENCE UNIVERSITY OF SOUTH CAROLINA

	General Atom	ics Center for the	Development of	Translational Nuc	lear Technology			Healthful Lifestyle	es*	
	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40	\$ -	\$ -	\$ 40
Other contributions/revenue										
Total contribution revenue							40			40
Investment Income										
Realized gain (loss)	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss)	-	-	-	103,728	103,728	-	-	-	103,728	103,728
Endowment income	-	-	-	42,032	42,032	-	-	-	25,333	25,333
Total investment income (loss)				145,760	145,760				129,061	129,061
Total revenue				145,760	145,760		40		129,061	129,101
Expenditures										
Personal services	-	-	-	36,778	36,778	-	-	-	36,681	36,681
Fringe	-	-	-	5,223	5,223	-	-	-	7,055	7,055
Travel	-	-	-	2,507	2,507	-	-	-	-	-
Supplies	-	-	-	19,105	19,105	-	-	-	2,989	2,989
Tuition assistance	-	-	-	5,594	5,594	-	-	-	7,087	7,087
Administrative fees	-	-	-	19,040	19,040	-	-	-	6,813	6,813
Other	-	-	-	91,785	91,785	-	-	-	23,826	23,826
Equipment										
Total expenditures				180,032	180,032				84,451	84,451
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	(34,272)	(34,272)	-	40	-	44,610	44,650
Transfers									(48,820)	(48,820)
Net Change in Fund Balances	-	-	-	(34,272)	(34,272)	-	40	-	(4,210)	(4,170)
Fund Balances - June 30, 2019	3,000,000	1,410,000		899,750	5,309,750	3,000,000	465,290		653,493	4,118,783
Fund Balances - June 30, 2020	\$ 3,000,000	\$ 1,410,000	\$ -	\$ 865,478	\$ 5,275,478	\$ 3,000,000	\$ 465,330	\$ -	\$ 649,283	\$ 4,114,613

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UNIVERSITY OF SOUTH CAROLINA

	State	Non-state	Non-state	Endowment		State	Non-state	Non-state	Endowment	
	Endowment	Endowment	Expendable	Earnings	Total	Endowment	Endowment	Expendable	Earnings	Total
Contribution Revenue										
Non-state matching funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other contributions/revenue										
Total contribution revenue										
Investment Income										
Realized gain (loss)	-	-	-	-	-	-	-	-	-	-
Unrealized gain (loss)	-	-	-	69,152	69,152	-	-	-	69,152	69,152
Endowment income	-	-	-	39,218	39,218	-	-	-	55,184	55,184
Total investment income (loss)			-	108,370	108,370				124,336	124,336
Total revenue				108,370	108,370				124,336	124,336
Expenditures										
Personal services	-	-	-	15,813	15,813	-	-	-	54,307	54,307
Fringe	-	-	-	3,578	3,578	-	-	-	4,186	4,186
Travel	-	-	-	16,200	16,200	-	-	-	19,297	19,297
Supplies	-	-	-	433	433	-	-	-	32,286	32,286
Tuition assistance	-	-	-	-	-	-	-	-	56,930	56,930
Administrative fees	-	-	-	21,710	21,710	-	-	-	50,385	50,385
Other	-	-	-	3,527	3,527	-	-	-	250,602	250,602
Equipment									17,682	17,682
Total expenditures				61,261	61,261				485,675	485,675
Excess (deficiency) of revenues over										
(under) expenditures	-	-	-	47,109	47,109	-	-	-	(361,339)	(361,339)
Transfers										
Net Change in Fund Balances	-	-	-	47,109	47,109	-	-	-	(361,339)	(361,339)
Fund Balances - June 30, 2019	2,000,000	1,582,098		1,248,374	4,830,472	2,000,000	3,750,000		876,506	6,626,506
Fund Balances - June 30, 2020	\$ 2,000,000	\$ 1,582,098	\$ -	\$ 1,295,483	\$ 4,877,581	\$ 2,000,000	\$ 3,750,000	\$ -	\$ 515,167	\$ 6,265,167

UNIVERSITY OF SOUTH CAROLINA

		Advar	nced Tissue Biofal	orication*			Ca	ncer Drug Discov	/erv*	
	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total
Contribution Revenue Non-state matching funds Other contributions/revenue Total contribution revenue	\$ - - -	\$ -	\$ - - -	\$ - - -	\$ - - -	\$ - -	\$ - - -	\$ - - -	\$ - - -	\$ - - -
Investment Income Realized gain (loss) Unrealized gain (loss) Endowment income Total investment income (loss)	- - - -	- - - -	- - - -	- - -	: : : :	- - - -	- - -	- - -	- - -	: : :
Total revenue										
Expenditures Personal services Fringe Travel Supplies Tuition assistance Administrative fees Other	:	-	: : : :	- - - - -	:	:	- - - - -	- - - - -	53,399 1,295 627 16,309 - - 4,666	53,399 1,295 627 16,309 - - 4,666
Equipment Total expenditures									76,296	76,296
Excess (deficiency) of revenues over (under) expenditures	-	-	-			-			(76,296)	(76,296)
Transfers				64,345	64,345				60,115	60,115
Net Change in Fund Balances	-	-	-	64,345	64,345	-	-	-	(16,181)	(16,181)
Fund Balances - June 30, 2019		<u> </u>		286,620	286,620				277,299	277,299
Fund Balances - June 30, 2020	\$ -	\$ -	\$ -	\$ 350,965	\$ 350,965	\$ -	\$ -	\$ -	\$ 261,118	\$ 261,118

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UNIVERSITY OF SOUTH CAROLINA

		Clinical Eff	fectiveness and Pa	atient Safetv*			Translat	ional Cancer The	rapeutics*	
	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total
Contribution Revenue Non-state matching funds Other contributions/revenue Total contribution revenue	\$ - -	\$ - - -	\$ - - -	\$ - - -	\$ - - -	\$ - -	\$ - - -	\$ - - -	\$ - - -	\$ - - -
Investment Income Realized gain (loss) Unrealized gain (loss) Endowment income Total investment income (loss)	- - - -	- - - -	- - - -	- - -	: : :	- - - -	- - - -	- - - -	- - - -	- - - -
Total revenue										
Expenditures Personal services Fringe Travel Supplies Tuition assistance Administrative fees Other Equipment Total expenditures	: : : : :	: : : : :	- - - - - - -	51,872 24,895 1,989 50 - 1,575 - 80,381	51,872 24,895 1,989 50 - - 1,575 - 80,381	: : : : :	- - - - - - -	- - - - - - -	64,131 16,520 - 21,714 - 7,331 - 109,696	64,131 16,520 - 21,714 - - 7,331 - 109,696
Excess (deficiency) of revenues over					00,001				100,000	103,030
(under) expenditures	-	-	-	(80,381)	(80,381)	-	-	-	(109,696)	(109,696)
Transfers				69,042	69,042				116,214	116,214
Net Change in Fund Balances	-	-	-	(11,339)	(11,339)	-	-	-	6,518	6,518
Fund Balances - June 30, 2019				286,264	286,264				27,038	27,038
Fund Balances - June 30, 2020	\$ -	\$ -	\$ -	\$ 274,925	\$ 274,925	\$ -	\$ -	\$ -	\$ 33,556	\$ 33,556

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UNIVERSITY OF SOUTH CAROLINA

		Med	lication Safety & E	fficacv*		Prostate Cancer Disparities*					
	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	
Contribution Revenue Non-state matching funds Other contributions/revenue Total contribution revenue	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	\$ - -	
Investment Income Realized gain (loss) Unrealized gain (loss) Endowment income Total investment income (loss)	- - - -		- - - -	- - - -		- - - -	- - - -		- - - -	- - - -	
Total revenue											
Expenditures Personal services Fringe Travel Supplies Tuition assistance Administrative fees Other Equipment Total expenditures	- - - - - - -	- - - - - -	- - - - - - - -	64,775 17,346 12,982 668 - 13,573	64,775 17,346 12,982 668 - - 13,573 - 109,344	- - - - - - -		- - - - - - - -		- - - - - - - -	
Excess (deficiency) of revenues over (under) expenditures	-	-	-	(109,344)	(109,344)	-	-	-	-	-	
Transfers				68,695	68,695				64,607	64,607	
Net Change in Fund Balances	-	-	-	(40,649)	(40,649)	-	-	-	64,607	64,607	
Fund Balances - June 30, 2019			<u> </u>	35,568	35,568			7,750	284,780	292,530	
Fund Balances - June 30, 2020	\$ -	\$ -	\$ -	\$ (5,081)	\$ (5,081)	\$ -	\$ -	\$ 7,750	\$ 349,387	\$ 357,137	

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UNIVERSITY OF SOUTH CAROLINA

		R	egenerative Medic	cine*				Stroke*		
	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total	State Endowment	Non-state Endowment	Non-state Expendable	Endowment Earnings	Total
Contribution Revenue Non-state matching funds Other contributions/revenue Total contribution revenue	\$ - - -	\$ - - -	\$ - - -	\$ - - -	\$ - - -	\$ - -	\$ - - -	\$ - - -	\$ - - -	\$ - - -
Investment Income Realized gain (loss) Unrealized gain (loss) Endowment income Total investment income (loss)	- - - -	- - -	- - -	- - -	- - - -	- - -	- - - -	- - - -	- - - -	- - -
Total revenue										
Expenditures Personal services Fringe Travel Supplies Tuition assistance		:	: : :	56,081 7,822 - -	56,081 7,822 - - -	- - - -	- - - -	- - - -	20,650 868 17,099 1,125	20,650 868 17,099 1,125
Administrative fees Other Equipment	- -	-	- - -	-	<u>.</u>	-	- - -		15,224	15,224
Total expenditures				63,903	63,903				54,966	54,966
Excess (deficiency) of revenues over (under) expenditures	-	-	-	(63,903)	(63,903)	-	-	-	(54,966)	(54,966)
Transfers				79,384	79,384				105,531	105,531
Net Change in Fund Balances	-	-	-	15,481	15,481	-	-	-	50,565	50,565
Fund Balances - June 30, 2019				128,339	128,339				275,118	275,118
Fund Balances - June 30, 2020	\$ -	\$ -	\$ -	\$ 143,820	\$ 143,820	\$ -	\$ -	\$ -	\$ 325,683	\$ 325,683

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SOUTH CAROLINA CENTERS OF ECONOMIC EXCELLENCE UNIVERSITY OF SOUTH CAROLINA

			Total - l	Jniversity of Soutl	h Carolina	
	State		Non-state	Non-state	Endowment	
	Endowment	_ <u>E</u>	ndowment	Expendable	Earnings	Total
Contribution Revenue						
Non-state matching funds	\$	- \$	2,340	\$ -	\$ 241,697	\$ 244,037
Other contributions/revenue			-	500	406,396	406,896
Total contribution revenue			2,340	500	648,093	650,933
Investment Income						
Realized gain (loss)			_	-	-	-
Unrealized gain (loss)			_	_	2,405,328	2,405,328
Endowment income			_	7,335	536,679	544,014
Total investment income (loss)		= =	-	7,335	2,942,007	2,949,342
Total revenue		<u> </u>	2,340	7,835	3,590,100	3,600,275
Expenditures						
Personal services			-	112,341	2,228,085	2,340,426
Fringe			-	23,281	447,242	470,523
Travel			-	2,801	245,025	247,826
Supplies			-	3,803	248,543	252,346
Tuition assistance			-	-	213,989	213,989
Administrative fees			-	-	417,539	417,539
Other			-	179,501	772,409	951,910
Equipment			-	(193)	103,854	103,661
Total expenditures		= =	-	321,534	4,676,686	4,998,220
Excess (deficiency) of revenues over						
(under) expenditures		-	2,340	(313,699)	(1,086,586)	(1,397,945)
Transfers		-	-	-	191,526	191,526
Net Change in Fund Balances		-	2,340	(313,699)	(895,060)	(1,206,419)
Fund Balances - June 30, 2019	66,500,000	<u> </u>	29,577,459	1,161,070	15,242,323	112,480,852
Fund Balances - June 30, 2020	\$ 66,500,000) \$	29,579,799	\$ 847,371	\$ 14,347,263	\$ 111,274,433