

ARD Updates

ASSOCIATION OF 1890 RESEARCH DIRECTORS

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DR. CHANDRA REDDY

Message from the Chair

Dr. Chandra Reddy

Dear Friends and Colleagues,
Traced back to 1915, Black History Month is an annual celebration of achievements by African Americans and a time for recognizing their central role in U.S. history. Also known as African American History Month, the event grew out of “Negro History Week,” the brainchild of noted Harvard-trained historian, Dr. Carter G.

Woodson, and other prominent African Americans.

In 1976, the nation's bicentennial, President Gerald Ford issued the first African American History Month proclamation, calling upon Americans to “seize the opportunity to honor the too-often neglected accomplishments of Black Americans in every area of endeavor throughout our history.” Since that time, every U.S. president has officially designated the month of February as Black History Month. Other countries around the world, including Canada, Ireland, the Netherlands and the United Kingdom, also devote a month to celebrating Black history.

As we begin to celebrate Black History Month, let us remember how integral African Americans have been to every chapter in the American story. Throughout February, I look forward to commemorating four centuries of Black History in America and the tragedies and triumphs of the African American experience. I am proud to represent communities in the ARD region with a long history of rich African American cultural life and civic contribution. I am also proud to work closely alongside my colleagues in the land-grant system to advance the causes of diversity, equity, inclusion and opportunity for all. Together, we will work to make higher education more accessible; combat discrimination; mitigate the glaring disparities in health care, education, food security, housing security, employment opportunities, access to transportation, and employment opportunities revealed by COVID-19; break down inhibitive factors to competitive programs, seek

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NIFA funding opportunities

CAPACITY BUILDING PROGRAM—The 1890 CBG program strengthens teaching, research and Extension projects in the food and agricultural sciences by building the institutional capacities of the 1890 land-grant institutions, including Tuskegee University, West Virginia State University and Central State University. The program supports projects that strengthen teaching programs in the food and agricultural sciences. Applications submitted to CBG must address at least one of the following NIFA strategic goals: sustainable bioenergy; food security; childhood obesity prevention; or food safety. For more information, read the [1890 CBG funding opportunity](#).

AFRI EDUCATION AND WORKFORCE DEVELOPMENT— NIFA's Agriculture and Food Research Initiative (AFRI) - Education and Workforce Development (EWD) focuses on developing the next generation of research, education and Extension professionals in the food and agricultural sciences. EWD invites applications in five areas: professional development for agricultural literacy; training of undergraduate students in research and Extension; fellowships for pre-doctoral candidates; fellowships for postdoctoral scholars, and a brand new program for agricultural workforce training. For more information, read the [EWD funding opportunity](#).





UAPB shows impacts with EA research funding

The Evans-Allen Act of 1977 was approved by Congress to provide capacity funding for food and agricultural research at the 1890 land-grant universities and Tuskegee University (the 1890 Institutions) in a manner similar to that provided to the 1862 universities under the Hatch Act of 1887. Research conducted under the Evans-Allen Program has led to hundreds of scientific breakthroughs of benefit to both the unique stakeholders of the 1890 institutions and the nation as a whole. The Evans-Allen Program has been extremely important in allowing the 1890 institutions to attract top-notch scientists to their campuses, conduct high-quality and innovative research and become more fully integrated within the land-grant system.

Below is an example of an impact of the 1890 research and Extension program submitted by scientists at the University of Arkansas at Pine Bluff (UAPB).

ISSUE

Sweet potato is propagated by stem cuttings, which over time, makes the crop susceptible to virus accumulation. More than 30 viruses are known to infect sweet potatoes. The use of virus-infected slips for the next season can ultimately affect the yield and quality of sweet potato roots. A survey showed that the acreage of sweet potatoes within the state of Arkansas has increased. This increase, along with the market demand for sweet potatoes and products made from the crop, have continued to increase the need for

sional representatives and legislators for the development of the Sweet Potato Foundation Seed Program. This allowed for the renovation of a greenhouse to meet the standard for sweet potato clean plant multiplication and equipping the tissue culture laboratory, as well as for the purchase of a tractor, a sweet potato planter and a sweet potato harvester. UAPB also constructed two new high tunnels to provide additional space for more sweet potato slip multiplication.

RESULTS

Although Sweet Potato Foundation Seed Program activities were scaled back due to the COVID-19 pandemic, funding from the state and the National Clean Plant Network for Sweet Potatoes (NCPN-SP) helped propagate 2,024 tissue culture sweet potato plants that were used to produce 40,000 slips during the summer of 2020. UAPB worked with 25 growers from Arkansas, supplying them virus-free sweet potato slips and technical assistance. UAPB's sweet potato program is now responsible for about 90% of the acreage under sweet potato production in Arkansas. Through this program, a commercial grower in Arkansas planted 20 acres using UAPB generation zero (G0) slips during the 2020 growing season. This will provide a significant amount of slips for the 2021 growing season in Arkansas.

Approximately 500 pounds of G1 roots were supplied to small-scale growers in Arkansas, including two state Extension agents who were responsible for servicing approximately

40 clients in sweet potato production. This included school children.

As part of UAPB's response to COVID-19 relief efforts, 1,200 pounds of sweet potatoes that were not selected as seed material after harvesting during the fall of 2019 were distributed to senior citizen centers, halfway houses and addiction recovery centers that serve 230 vulnerable residents within the city of Pine Bluff. An additional 2,000 pounds of sweet potatoes were donated to the mayor's office to support an event organized to encourage local participation in the 2020 census.

For more information contact: Dr. Shaun Francis, francis@uapb.edu or (870) 575-7224 and Dr. Sathish Kumar Ponniah, ponniash@uapb.edu or (870) 575-8548.

This project was supported primarily by the Evans-Allen Program of the USDA's National Institute of Food and Agriculture (NIFA) with secondary support from the National Clean Plant Network-Sweet Potato.



high quality, virus-indexed planting material.

We compared the sweet potato variety Beauregard generation two (G2) and generation three (G3) seeds with earlier generation one (G1) seeds. The results indicated that the rate of reinfection in the field was higher with G3 roots than G1 seeds, and virus-infected plants showed a 31% to 44% greater yield reduction than with virus-free plants. Problems with yield reduction can be solved by providing virus-free planting slips to farmers.

During the last decade, the cost of these planting materials are major constraints in the production of sweet potatoes. For years, growers have purchased G2 roots from commercial producers outside of Arkansas. This translates into a higher production cost, delayed planting time due to shipping challenges, occasionally compromised quality of planting materials and the potential for disease and insect transmission across state boundaries.

RESPONSE

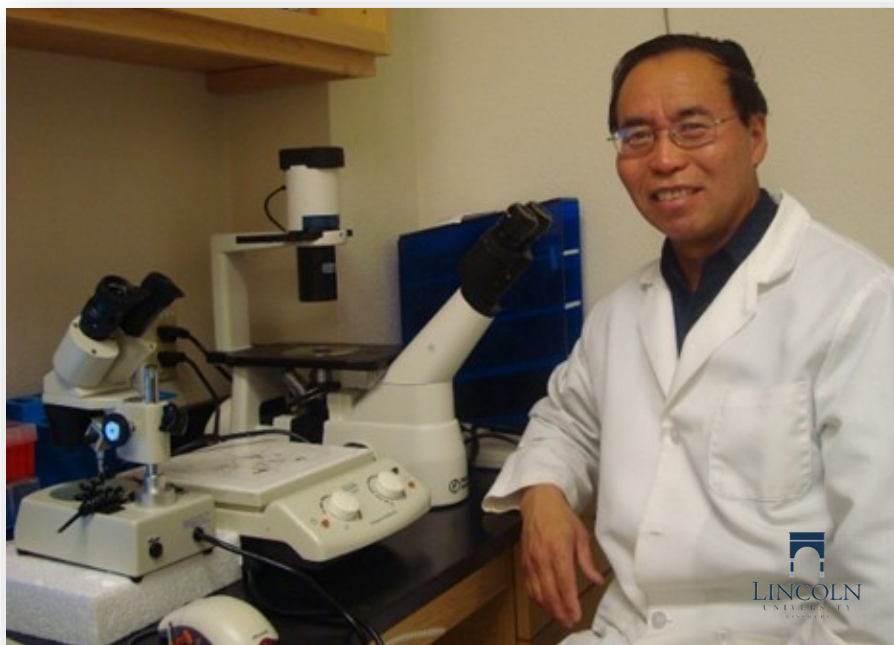
In 2009, UAPB received \$400,000 from Arkansas congress-

Lincoln award designed to increase animal science graduates

Dr. Tumen Wuliji, associate professor of animal science at Lincoln University of Missouri, was awarded the NIFA Graduate Fellowship Grant entitled “Establish and enhancement of animal science graduate training program at Lincoln University”.

There is strong demand and ample employment opportunity in animal agriculture, especially for individuals with graduate training to enhance animal productivity, adapt technology, and increase food security.

However, animal science graduate student enrollment and training among underrepresented and underserved populations are lacking. This grant award is to establish a graduate-level animal science program to recruit, train and support master’s students at Lincoln University of Missouri. The project was funded \$246,000 to



Dr. Tumen Wuliji in his research lab at Lincoln University.

support six master graduate fellows.

The specific objective is to provide graduate training and confer degrees to the master’s students in integrated agricultural systems in three specialized areas of animal science: 1) small ruminant production; 2) outdoor poultry production; and 3) food-fish production. Each fellow is required to complete 33 credit hours of graduate courses, conduct field research and write a research-based thesis.

The fellows will be selected following the Lincoln University standard graduate admission criteria as

well as the USDA NNF funding criteria with a special consideration for underrepresented groups. This grant award will help enhance diversity of the animal science graduate workforce with expertise in the TESA and strengthen the food animal industry’s competitiveness in the nation.



DR. ALFRED L. PARKS

College of Agriculture and Human Sciences Interim Executive Associate Director of Research and Interim Farm Director Alfred L. Parks, Ph.D., has been named a 2021 Fellow by the Agricultural & Applied Economics Association — the organization’s most prestigious honor.

AAEA Fellows are

selected for their continuous contribution to the advancement of agricultural or applied economics.

“I am honored to be named a 2021 Fellow by the Agricultural & Applied Economics Association,” Parks said. “My career reflects the things I am most passionate about, and to be recognized for my professional efforts is truly rewarding. I thank my colleagues and the AAEA for this honor.”

Parks was nominated for the honor by CAHS Dean Gerard D’Souza and col-

PVAMU’s Parks named AAEA Fellow

leagues from Purdue University, the University of Tennessee, and Mississippi State University.

“We are delighted the AAEA Selection Committee selected Dr. Parks as a 2021 Fellow,” D’Souza said. “Dr. Parks’ career demonstrates a deep commitment to agriculture and economics that has inspired countless students and colleagues. He is indeed a worthy recipient of this honor.”

Parks began his career as an assistant professor at Southern University and A&M College. He later joined the faculty at Prairie View A&M University (PVAMU) and has held various faculty and administrative positions.

Over his career, he taught seven different undergraduate courses and three different graduate courses averaging 4.5 out of 5.0 on his student evaluations. He is also an established mentor to CAHS students.

“Dr. Parks’ mentorship inside and outside of the classroom helped me discover and cultivate a passion for agricultural and food system research,” said Bobby J. Smith II, Ph.D., an assistant professor at the University of Illinois at Urbana-Champaign, and Parks’ former student and mentee.

“As a professor, Dr. Parks created

an intellectually transparent classroom that yielded productive and applied discussions surrounding some of the most pressing societal problems impacting the production, consumption, and distribution of food,” he said.

In addition to his teaching efforts, Parks has been awarded over \$5.5 million in funded grants to support teaching, research, and Extension-related activities, chaired over 70 masters’ theses, and mentored many undergraduate students in research.

Parks has received numerous awards and honors, including the 2019 AAEA/Committee on the Opportunities and Status of Blacks in Agricultural Economics/Committee on Women in Agricultural Economics Legacy Award. Most recently, in 2020, he received the Experiment Station Section Excellence in Leadership Award from the Association of Research Directors.

[Editor’s note: Let’s recognize and congratulate the College of Agriculture and Human Sciences at Prairie View A&M University for having two scientists selected by their respective professional societies as Fellows. In the August 2020 edition of ARD Updates, Dr. Ali Fares was announced as a Fellow of The American Society of Agronomy.]

NC A&T researchers investigate SARS CoV-2's potential to infect food animals

Reprinted from A&T CAES Research Magazine

A source of tasty meat. The inspiration for countless puns. Responsible for \$10 billion in yearly revenue and 44,000 jobs statewide, according to a recent economic impact survey. It also is a source of identity for North Carolina towns from Lexington in the west to Greenville in the east.

In addition to their economic impact and contribution to the food supply, pigs are connected to humans through a host of anatomical similarities known to every biology student. Pig skin, for example, is a go-to treatment for burn victims. Pig heart valves have successfully replaced human heart valves, being of the same approximate size and shape. Fetal pigs' muscles are almost identical to those of humans.

SARS-CoV-2, the novel coronavirus currently responsible for a global pandemic, swept across North Carolina in early 2020, animal sciences professor Radiah Minor, Ph.D. – an immunologist whose research has included swine – began to wonder whether those anatomical similarities could mean that pigs and, to a lesser degree, chickens and cattle could be infected by SARS-CoV-2. A respiratory virus, SARS-CoV-2 causes the disease COVID-19, which had caused more than 25 million confirmed infections and contributed to more than 400,000 deaths nationwide by late January, according to the Centers for Disease Control and Prevention.

This fall, Minor and a team of colleagues from the College of Agriculture and Environmental Sciences will put that question to the test, thanks to a grant of more than \$240,000 from the N.C. Policy Col-

Their goal is twofold: first, to ascertain whether the SARS-CoV-2 virus can infect pigs, chickens and cattle; and, if so, to establish safety protocols to protect the thousands of workers across the state who come into contact with each species.

“There seems to be a prevailing assumption that animals, particularly livestock, couldn't be infected by people with the virus, but that aspect really has not been studied,” Minor said. “There are still so many unknowns. We became curious about food animals, particularly swine, which have a high percentage of genetic similarity to humans.” Minor pointed out that pig and human lungs and hearts are similar in size and structure.

“Chickens and cattle are less anatomically similar, but we don't know if they can be affected. We really should.”

As the virus raged through the spring and summer, Minor was intrigued by news reports of animals testing positive for COVID-19: a tiger in the Bronx, a dog in Hong Kong and another in Chapel Hill, and several domestic cats. One commonality in these cases, she noticed, was that all the animals had been in proximity to people who also had tested positive. The virus itself is thought to be of animal origin and is believed to have originated in Wuhan, China.

In addition to this anecdotal evidence, Minor said, there's scientific evidence as well: Recent studies have shown that the virus uses angiotensin-converting enzyme 2, or ACE2, receptors in respiratory, cardiovascular, intestinal and nervous-system cells to infect humans and some animals, including pigs. Then, there's precedent: Two previous epidemic-causing coronaviruses – Middle East Respiratory Syndrome, or MERS, which became known in 2012, and Severe Acute Respiratory Syndrome, or SARS, first identified in 2003 – both were detected in agricultural animals.

“This summer, I overlaid a map of the less-populated hotspot counties in North Carolina, where cases of the virus were doubling every two or three days, with a map of the counties significantly involved in pig, poultry and cattle production. They matched,” she said.

“Given their proximity to humans, it seemed that food animals should be included in community testing initiatives, especially swine, poultry and cattle. It may be that animals can be reservoirs for the virus. Maybe they're not spreading the disease, but if it's in them, and people work with those animals, they may be exposing themselves.”

The results of Minor's study could have a significant impact on how agricultural animals are handled by their human ranchers and processors nationwide, but particularly in North Carolina, where pigs and poultry are the top agricultural commodities. The state is the country's second-largest swine producer, with 9.7 million hogs on nearly 2,300 operations, and its fourth-largest producer of broilers, with nearly 515.3 million chickens on 5,700 operations, according to the Council for Agricultural Science and Technology. Together, swine and poultry accounted for nearly \$39 billion in revenue and nearly 200,000 jobs in the state in 2019, accord-



DR. RADIAH MINOR



laboratory, the University of North Carolina system's research collaboration agency. The team includes Leonard Williams, Ph.D., director of N.C. A&T's Center for Excellence in Post-Harvest Technologies; Andrea Gentry-Apple, DVM, Uchenna Anele, Ph.D., and poultry specialist Yewande Fasina, Ph.D., all from the Department of Animal Sciences; and Jenora Waterman, Ph.D., and Vinaya Kelkar, Ph.D., from the Department of Biology.

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equitable funding and develop innovative solutions to the vexing problem facing food and agriculture.

While we reflect on the extraordinary accomplishments of African Americans, let us also remember the tremendous sacrifices made in order to advance civil rights, the fight for justice, and equality for all. We must honor their legacy by continuing the fight against injustice in all forms, and by ensuring that our democracy is accessible to every American. Additionally, we need to be mindful of the important contributions of the 1890 land grant universities. The food and agricultural sciences in the research, academic and Cooperative Extension programs at the 1890 universities have made significant contributions to the local, regional, national and global food systems. The 1890s are proud of our history, but we cannot stay in our history. We recognize and honor the hard work, dedication and incredible talents of many people who have positioned the 1890 universities to develop and implement innovative programs in very intentional ways. We are positioned to compete and compete at the very highest levels across a broad spectrum of disciplines.

Last month, members of the ARD, AEA and the Council of 1890 Deans of Agriculture held a fourth annual joint business meeting. Hosted by Florida A&M University, this virtual gathering of 1890 administrators was very engaging and productive and, by design, engaged in important discussions about pressing issues confronting the 1890 universities. Our meeting focused specifically on the centers of excellence; the 1890 scholarship program; FY 2021/2022 appropriations and advocacy; the portfolio of NIFA programs and policies; strategic realignment of NIFA funding lines; communications, marketing and branding; Agriculture Future of America and agricultural research infrastructure advocacy. Kudos to my colleagues, Vonda Richardson, AEA chair; Lloyd Walker, Deans' Council chair; Albert Essel, AEA executive administrator, and Alton Thompson, ARD executive director, for planning and implementing a very impactful series of sessions that was both content-rich and allowed sufficient time for discussion of concerns crucial not only to the 1890s, but to the land-grant system.

The 2021 Joint CARET/AHS Virtual Meeting will be held on Feb. 26 - March 4. The theme for the meeting is "**Land-Grant Universities: Leading and Partnering with Solutions for Life's Challenges for America.**" As we focus on our advocacy efforts, I am asking each of the research directors, deans/administrative heads of agriculture and CARET delegates to participate actively in this virtual meeting and the virtual visits to Capitol Hill. Our voices need to be lifted and heard.

In addition to advocating for "APLU's Unified Request for NIFA Funding," and the "1890 Land-Grant System Priorities for Funding Requests in Food and Agriculture," I encourage all of you to advocate for the "Agricultural Research Infrastructure." As presented in an ESS webinar on Jan. 11 and discussed at our joint meeting, a significant challenge faced by the land-grant university system, particularly in the 1890s, is the need for substantial investment in a degrading agricultural research infrastructure. A recent comprehensive evaluation performed by Gordian ([A National Study of Capital Infrastructure at Schools of Agriculture: A 2020 Update](#)), inclusive of the 1890s, identified \$11.5 billion in deferred maintenance, a 36.9% increase from an estimate made five years ago. We need to act now. If we do not address the problems now, the solutions will become more intractable, the costs greater, and the human, social, economic and environmental damage irreparable.

To assist you to advocate for this \$11.5 billion infrastructure request, the core working group, led by ESS Chair, Moses Kairo, has distributed an **ARIA Advocacy Toolbox**. If you have not received this toolbox, please contact Moses at mkairo@umes.edu or (410) 651-6072.

As you know a few positive things have begun to happen for the 1890s. Our federal research, Extension and student scholarship allocations have gone up significantly this year. HBCUs have been given additional support through CARES Act. After Black Lives Matter demonstrations this past summer, industry partners are trying to support students at HBCUs in a meaningful manner. And we are thankful for these green shoots and expect

more to happen in the coming years. We have a role to play to move the goal post forward as leaders of the prestigious 1890 land-grant programs. Let us try to educate the public, policy makers, industry leaders and the social influencers in our society about the historical funding disparities, inequities, missed opportunities and many other unacceptable treatments we have endured over a period of time.

Finally, I hope your 2021 is off to a strong start and you are staying safe, healthy, and virus-free. As we look back at the past year, we are proud of what ARD has accomplished despite the challenges brought by the pandemic. As I stated last month, "I'm convinced that the 1890 land-grant institutions will emerge from COVID-19 more resilient, more agile with new opportunities to better serve our students and clientele. . . we will use this crisis as an opportunity to learn, to develop best practices, to adapt, to reimagine and to innovate."



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1890 Land Grant Universities

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ARD Updates is published monthly by the Association of Research Directors. To suggest articles, contact Dr. Alton Thompson at athompson1@ncat.edu



Applications accepted for FSLI's 17th cohort

The Food Systems Leadership Institute (FSLI) offers executive leadership development to upper-level leaders in higher education, government and industry to prepare them to meet the leadership challenges and opportunities of the future. The two-year FSLI experience includes three week-long residential sessions, personal leadership coaching, mentoring, a personal development plan, distance learning activities and an individual leadership project. The FSLI is designed for experienced leaders.



Fellows include leaders from various sectors, including education, industry and government. Participant titles include program or division directors, provosts/vice presidents, experienced department heads/chairs, deans and associate deans and others working in leadership of administrative capacities.

More information on the FSLI program can be found on their [website](#). The application process is being done all online. See the ["Apply" section](#) of the website.

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ing to industry sources.

Risk to the food supply is generally low, Minor said. Humans can't get the virus by eating it because it can't survive the high temperatures of cooking or the rigors of stomach acid. Picking up a package with virus on the outside poses a fairly low risk also, Minor said; a "critical mass" of virus must be present to bring about infection.

Instead, the main risk to people is the potential for exposure where they didn't expect it.

"Knowing for sure that animals could harbor the virus would lead to protocols for people who work with food animals," Minor said. "We could take steps to safeguard the health of those workers."

Those steps might include changes such as farm workers wearing masks, face shields and coveralls that are changed daily, like those of hospital workers.

Using the tissues of swine, poultry and cattle collected from the state's slaughterhouses, Minor and her team will test for the presence of SARS-CoV2 virus and its specific antibodies, using guidelines and protocols established by the CDC. If the virus is found to be present, the team will develop animal-specific standard operating procedures for sampling, testing and herd-management practices, aimed at mitigating the spread of the virus. The guidelines would be shared with public health officers, state veterinary officials and farmers.

Although she doesn't know what the group will find, Minor's primary goal is to know all that can be known about how the virus spreads.

"COVID-19 is the most significant health crisis of the modern era. We need to determine all the places the virus can live, and if there's a potential for exposure, eliminate that exposure," she said. "Right now, there's a lot that we still don't know. If we're going to quell this pandemic, we have to do what we can."

ARD CALENDAR



2021 JOINT CARET/AHS MEETING | Virtual

Feb. 26 - March 4 | Virtual

"Land-Grant Universities: Leading and Partnering with Solutions for Life's Challenges for America." Mark your calendars and official registration materials will be sent out shortly.



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SAVE THE DATE

SAVE THE
DATE!

AEA SYSTEMWIDE EXTENSION CONFERENCE, July 25-29, 2021 | Orlando, Florida