

## Poultry Science

# Connections

Summer 2020

UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES

## A Note From the Department Head

Dr. Todd Applegate  
Department Head and Professor

Dear Friends:

I hope this newsletter finds you well. Our faculty, staff and students transitioned to online learning at the end of March, and we ceased many ongoing research projects to prevent the spread of COVID-19, thereby making the Poultry Science Building and our Research Center quieter than usual places this past spring and summer. We have been phasing back research since mid-June with additional preparations for our students to return to campus. I give substantial kudos to our faculty and staff for their resilience and persistent patience to make the best of the situation, and continuing their research and Extension activities remotely as best as possible.

While our undergraduate student numbers are holding steady, our graduate student population continues to grow. We will have 62 students this fall term, an all-time high for the department. My heart goes out to all our students, as they have not been able to have the enriching and personal growth experiences that an in-person experience brings. In some cases, their internships were cancelled; and in many cases, their financial situation has been strained even further. We are ever thankful to our scholarship donors that makes situations like we've experienced a little less stressful for those students.

While the state's budget has suffered substantially the past few months, we are extremely pleased that the state legislature and Governor approved funding for architectural drawings for a new Poultry Science Building. The preparation and bidding process will begin in the coming months in concert with UGA and USG. We are truly excited for what this would bring for our department's research, teaching, and Extension missions; as we engage many to bring this public/private partnership to a reality.

Speaking of partnerships, a group of ten of our faculty have been partnering with USDA/ARS to further work on gut health, focusing

on the consequences and coping strategies with conversion to non-antibiotic ever production systems. Specifically, their work centers on key areas, including: a) developing genomic sequencing of coccidial strains to further develop diagnostic and research tools, b) development of nanoparticle vaccine(s), to cope with Clostridium based enteritis, c) seek a better understanding of how cocci reproduces in populations of birds as well as variations in individual bird responses, influence of the rearing environments, and how cocci acts in different litter environments outside of the bird, d) determine the persistence of Salmonella, Campylobacter, and Clostridium in different rearing environments, and e) functionality and modes of action of different feed additives/feeding strategies.

During the past year, Drs. Webster and Fowler have moved on from our faculty. This August, we're pleased that Dr. Rami Dalloul (Poultry Immunologist) and Dr. Nada Tamim (Undergraduate Teaching Coordinator) will be joining our faculty. We are also extremely pleased that we were successful in obtaining an additional faculty position from a competitive cluster hire offered by UGA's President in "Smart/Precision Agriculture". This faculty member will be joining us in January and will focus on technology applications to poultry well-being issues.

Last, but not least, I feel truly blessed to work with an amazing group of individuals in the department each and every day. I would like to give special recognition to Dr. Sammy Aggrey, who received the Richard B. Russell Professorship in Agriculture; Dr. Rami Dalloul, who will be the first faculty holding the R. Harold Harrison Distinguished Professorship; Dr. Jeanna Wilson who became a Fellow of the Poultry Science Association; Dr. Woo Kyun Kim who was awarded the American Feed Industry Association Poultry Research Award from the Poultry Science Association; and Dima White (PhD Student with Dr. Kim), who was awarded the Maurice Stein Fellowship Award from the Poultry Science Association. Congratulations to you all.

While these past few months have left us all with a feeling of uncertainty, our hope is that we can continue to attack each day, and remember our commitment to growing the poultry sector which produced one of Georgia's greatest success stories. We continue that commitment today because science never sleeps. Innovation is impatient. And, hungry people around the world will survive on our success.



**Department of Poultry Science**  
College of Agricultural & Environmental Sciences  
**UNIVERSITY OF GEORGIA**

## Dr. Fairchild on COVID-19's Effect on Industry Events

Claire Marie Coleman  
Department Communications Intern

The COVID-19 pandemic has created a copious amount of unprecedented challenges that has led everyone to stretch their imagination and ingenuity in order to retain some semblance of normalcy, or even keep large events from being outright canceled. The Poultry Science Association (PSA) was no exception to these challenges as they planned the PSA's Annual Meeting. Dr. Brian Fairchild, Professor in the University of Georgia Department of Poultry Science serves as the current Program Chair. Though the meeting was originally canceled due to COVID-19, PSA decided to take this challenge head-on and, rather, move the meeting to a virtual platform. After much collaboration and discussion about how a meeting of this scale would function while maintaining the quality attendees are used to, Dr. Fairchild, the program committee, PSA Staff and the PSA Board of Directors came up with a format that allowed students and speakers to share their research presentations and for attendees to have access to the aspects of the meeting that most interest them. During the meeting, there were virtual "doors" for each session as well as several Q&A "doors" that allowed participants to click on the sessions they wanted to access. This format was put into place so they could provide people with as much of the typical meeting experience as possible.



Dr. Fairchild shared that one of the challenges surrounding the shift to a virtual platform was formatting the meeting in a way that allowed speakers to share their presentations while holding the attention of the viewers as they watch from their computer screen rather than in person.

**"Now that people have gotten some experience with the technology and methodology, I think this is going to be another way to go." - Dr. Brian Fairchild**

Alongside his work as the PSA Chair, Dr. Fairchild and Michael Czarick, Senior Public Service Associate for the UGA Department of Poultry Science, have found an additional way to keep professionals from missing out on another significant event in the poultry industry. They have held several webinars for viewers after getting feedback indicating a great deal of disappointment about the cancellation of the Hot Weather Workshop due to the pandemic. This allowed participants to get the information they would have otherwise gone without while also interacting with the specialists whom serve as speakers. The webinars have mostly been focused on operations and are held live via GoTo Meeting depending on the length of the presentation.

Afterwards, a recording of the presentation is available for one week following the event. These webinars have experienced fantastic reach, with any given meeting hosting 800-1,600 pre-registered attendees, with viewers participating from 30 states and 70 countries. When asked if he thought these webinars might continue in the future after social distancing is no longer necessary, Dr. Fairchild was very open to the possibility. "Now that people have gotten some experience with the technology and methodology, I think this is going to be another way to go", Fairchild said. If you are interested in more information or registering for one of these webinars, you can visit their website [Poultryventilation.com](http://Poultryventilation.com) or their Facebook page, "UGA Poultry Housing".

## Professor and Student Perceptions During COVID-19

Claire Marie Coleman  
Department Communications Intern

When the University of Georgia was forced to abruptly shift to an online format last spring due to COVID-19, professors were faced with the unique challenge of moving all courses online in a very short amount of time. Dr. Laura Ellestad, Assistant Professor at the University of Georgia Department of Poultry Science, was faced with the challenge of moving online in addition to finding a way to teach a hands-on surgery course without in-person instruction. When asked about the largest obstacle she faced teaching this course online, Ellestad said, "Most of the students take this class for the practical hands-on experience they get with surgical techniques that are relevant to any pre-health field (veterinary, medical, or dental) – drawing blood and performing simple hematological diagnostic tests, administering injections, inserting an endotracheal tube, delivering general anesthesia and appropriate intraoperative monitoring, making incisions in the skin and soft tissue, isolating and manipulating surgical targets, and suturing. In addition, they develop "soft skills" related to communication, teamwork, problem-solving, adaptability, and time management as they work in their surgical teams throughout the semester to perform procedures and post-operatively monitor the birds. Unfortunately, there really is no good way to duplicate this experience online, as watching videos and reading descriptions of the techniques and procedures are not the same as doing them." Dr. Ellestad also said that students were able to practice five surgery techniques before they had to move online due to COVID-19, and that they had reached the point in the semester where students were starting to gain confidence and work on more difficult cases. Not being able to continue that progress in person was incredibly disappointing for both the students and Dr. Ellestad alike. However, in the face of disappointment, Dr. Ellestad did her best to replicate the in-person lab experience by making videos on technical aspects of the procedures with the help of her instructional assistants. To boost communication between students, she provided each surgery team with a case study where they had to identify potential causes for the situation that was described, indicate how they would go about determining which of the potential causes was most likely, and then what they would do in the moment to address the situation and how to avoid it happening in the future.



## Internship Spotlight

Recent events haven't gotten our students down... check out what Poultry Science Senior Audri Crews is up to during her summer internship with the Georgia Department of Agriculture's Animal Feed Program!

Audri says that the department she is interning for is, "designed to protect consumers by labeling and testing animal feed products to make sure they are safe for animals. I spend a lot of time approving feed labels for all species, as well as in the field taking samples."

When asked how being a Poultry Science major helped her in her internship, Audri said, "Much of what I'm doing is directly related to animal nutrition, and I think back often to Dr. Kim's nutrition class and how much I enjoyed it! I'm thankful for the department giving me the background knowledge I need to be successful in the workplace."

Keep up the great work, Audri!



## Professor and Student Perceptions During COVID-19 (Continued)

Aside from the challenge of teaching such a hands-on course online, Dr. Ellestad says that she feels as though the biggest challenge she faced was being able to effectively connect with students and deliver the content in a way that would be accessible to each of them. Dr. Ellestad combatted this issue as best she could by first sending out a survey to gauge how her students were feeling. Next, she took the time to post information in a wide variety of formats, so everyone had an option of how they received the information as well as making herself available for Zoom office hours where she hosted a meeting for several hours to answer questions, explain content, and allow students to provide feedback. When asked if she had any methods she would recommend to fellow professors, Dr. Ellestad said that she believes every course is different and requires a different approach, however, taking the time to provide the content to the students in multiple formats that would allow them to choose how to interact with the material was effective and worth the additional time it took.

Reed Dillard (BSA Avian Biology, '20), was one of the many students who were forced to adapt to a very different way of learning almost immediately. Though Reed had taken an online course prior to transferring to the University of Georgia, it was not his chosen method of learning and he has opted to take only in-person courses since he transferred to UGA in the fall semester of 2018. When asked what the most difficult part of shifting to an online format was for him, he said, "The most difficult thing was time management. I had a hard time making time to sit down and study. When I'm home, I have various chores to accomplish and I like to help my neighbors as well. Most of the time I would get caught up helping them and wouldn't have time for good study time." Reed also said that he took many hands-on classes this spring, including Dr. Ellestad's surgery course, that were hard to absorb online especially as he is a hands-on learner. When asked what the biggest thing he learned from the move to online courses, Reed said, "I learned that everyone found it difficult to move online. But faculty in our department were more than willing to help us in any way and they were very accommodating". Dillard graduated in May and will begin graduate school this fall under Dr. Adam Davis, Assistant Professor at the University of Georgia Department of Poultry Science.

Kylie Bruce, a rising senior majoring in Poultry Science at UGA, had her junior year as she knew it come to an abrupt halt when courses were forced to move online. Kylie says that she had experienced several online classes prior to the shift to an online format due to COVID-19, however, none quite like this. She says it is very different having a course originally designed for the online format than having to shift an in-person course online mid-semester. Having to quickly adjust to this new way of learning, Kylie said for her, "The most difficult thing about moving online was not being able to form in-person relationships with my professors. The Poultry Science Department makes it easy to get to know professors, and it just was not the same with online Zoom courses." Nonetheless, Kylie chose to look on the bright side when asked about her biggest takeaway from this experience. She says she has learned that you should make the most of every situation you are placed in and that this experience made her learn "that I should never take my situation for granted. Having my junior year cut short will make me appreciate my senior year even more." During the summer, Kylie faced yet another consequence of COVID-19 when her internship with Cobb-Vantress was delayed. However, Kylie says that she feels very lucky that it was not canceled altogether, and she started her internship at the beginning of June.



Photo: Dr. Laura Ellestad

## Nada Tamim Joins UGA Department of Poultry Science as Undergraduate Teaching Coordinator

Maria M. Lamerias For CAES News

Nada Tamim will join the University of Georgia's Department of Poultry Science as the undergraduate teaching coordinator on August 1.

Tamim Joins the UGA College of Agricultural and Environmental Science from Virginia Tech, where she served as the Undergraduate program director for the Department of Animal and Poultry Sciences. In that position, she focused on improving and enhancing the overall undergraduate experience, beginning with recruitment, orientation and academic advising all the way through professional development and preparing graduates for the work force.

"Because we are committed to a higher quality of learning, UGA Poultry Science has a rich legacy of producing exceptional leaders for science and industry," said Todd Applegate, head of the CAES Department of Poultry Science. "Dr. Tamim's career has been dedicated to raising the bar on students' experience and professional development, which will help us elevate and continue that legacy."

Tamim has extensive and varied teaching experience that focuses on student engagement and mentoring. As an educator, she has taught a variety of courses including "Professional Development," "First Year Experience," "Animal Products" and "Introduction to Animal and Poultry Sciences."

"I look forward to working on and building programs and experiences at UGA for student learning centered around high-impact practices including experiential learning, peer mentoring and professional development, preparing students to be leaders in the field after graduation," Tamim said. "My greatest rewards center around the students' success, sharing their learning experiences and empowering them to be engaged in their education and ensuring they accomplish purposeful goals."



As a mentor, Tamim developed a departmental peer mentor program that has helped foster a culture of support and community among the undergraduate population. Her mentoring programs helps students gain valuable experience with problem solving, teamwork, communication and leadership skills.



### **Congratulations!**

**Rebecalyn Barber**, a rising second year Poultry Science student, was named the 2020 recipient of the **Andrew F.**

### **Giesen III Poultry Science Foundation Undergraduate Award!**

This award provides funds to allow for an undergraduate student to conduct research in partnership with a company and institutional partner. In this case, Rebecalyn will be working on a project with Hy-Line International at U.S. National Poultry Research Center.

We are so appreciative of our partnership with the USDA/ARS and the generous opportunities it provides to our students.

## Connect with us on social media!



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## Rami Dalloul Named First R. Harold Harrison Distinguished Professor in Poultry Science

Maria M. Lamerias For CAES News

Poultry immunologist Rami Dalloul has been named the R. Harold Harrison Distinguished Professor in Poultry Science at the University of Georgia's College of Agricultural and Environmental Sciences (CAES).

The R. Harold Distinguished professorship was established through the generosity of the Luther and Susie Harrison Foundation to strengthen the CAES Department of Poultry Science. Dalloul is the first faculty member to hold the newly established professorship.

Dalloul joins the UGA Poultry Science Department August 1, and comes from Virginia Tech, where his research focused on investigating gastrointestinal pathogens of poultry and the molecular mechanisms of enhancing the immune response of birds through diet and the environment.

"For decades, Georgia has been the poultry capital of the world. Today, we aim to make Athens the epicenter of poultry science, and we are greatly appreciative of the Luther and Susie Harrison Foundation for helping that become a reality," said Todd Applegate, head of the CAES Department of Poultry Science. "Dr. Dalloul will move us forward toward that vision, as he has a rich history of building cross-functional teams of key poultry scientists from across the nation."

Dalloul plans to continue his line of research targeting costly pathogens and diseases that are critical to protecting Georgia's poultry sector— the state's largest agricultural commodity by value.

"Particularly, I will focus on the major issues pertaining to the state industry and stakeholders including parasitic and bacterial diseases, whether persistent or seasonal," Dalloul said.

Dalloul also aims to promote basic understanding of the poultry immune system by generating resources that are critical to delineating key host-microbe interactions.

"Along with the vast poultry science expertise at UGA, I will integrate additional discovery and application areas to enhance the interdisciplinary poultry program that serves this important animal sector across the state," he said. "Collectively, such an integrated approach aims to better design prevention and treatment strategies in the field, and train the next generation of poultry scientists and producers."



**For more information on the department, please visit our website at:**

[poultry.caes.uga.edu](http://poultry.caes.uga.edu)



## Samuel Aggrey Named Richard B. Russell Professor in Agriculture

Maria M. Lamerias For CAES News

University of Georgia Professor Samuel Aggrey has earned the Richard B. Russell Professorship in Agriculture.

Established by the Richard B Russell Foundation through a generous gift, the endowed professorship is meant to support innovative research and teaching that advances agricultural science, research and conservation.

Aggrey is internationally known for his research in the College of Agricultural and Environmental Sciences (CAES) Department of Poultry Science.

"I'm so thankful to have a researcher of Dr. Aggrey's caliber with us on faculty in the Department of Poultry Science at the University of Georgia," said Todd Applegate, head of the Department of Poultry Science. "His research has spanned numerous areas, including nutrigenomics, as well as developing our understanding of individual bird and tissue responses during a disease or other stressors.

Additionally, over his career, he's been at the forefront of developing our future scientists not only through his lab at UGA, but also in partnerships with other universities and nongovernmental agencies throughout the world, especially in Africa. My heartfelt congratulations go out to Dr. Aggrey for this honor."

Aggrey said the honor will allow him to expand his research program and attract a higher caliber of graduate students into the program, purchase laboratory equipment and help him establish an international lecture.

"I feel that this appointment recognizes the work we have done in my research program. Such recognition provides a prestige and authority in the field in which you are working, which allows you to attract more grants and also helps in recruiting graduate students," Aggrey said. "The primary goal of academics is to make a contribution – in your department, in your college, in your university and in the world. I am very pleased to have received this honor, but with or without recognition, I believe you should try to do everything that is expected of you and more."



Aggrey plans to use support from the professorship to advance his lab's research into stressors on poultry production, including heat stress and *Eimeria*, a genus of parasites that includes various species capable of causing the disease coccidiosis in poultry and other animals.

"Normally when you start any new research program it takes three to five years to gain traction in that subject. We have really gained a lot of insight in this area and we are systematically trying to unravel all of the mysteries around it," he said. "You also don't get to where you are just by yourself."

Aggrey is currently collaborating with Romdhane Rekaya in the UGA Department of Animal and Dairy Science, Adelumola Oladeinde with the U.S. Department of Agriculture's Agricultural Research Service, Llong Chai in the UGA Department of Poultry Science, Martin Wagner at the University of Veterinary Medicine in Austria, and other scientists at the International Livestock Research Institute, Kenya; University of Ghana; and Cairo University.

An expert in developing genetic markers that help poultry breeders produce more disease-resistant, feed-efficient and heat-tolerant birds, Aggrey is a leading expert in the study of nutrigenomics. His lab is also investigating how feed components, parasite load and genetics impact the birds' microbiome and gut health. He is co-editor of the definitive texts "Poultry Genetics, Breeding and Biotechnology" and "Advances in Poultry Genomics and Genetics." He is internationally sought-after to conduct training on breeding methods.

## Congratulations to Dr. Bruce Webster on His Retirement

Claire Marie Coleman  
Department Communications Intern

The Department of Poultry Science at the University of Georgia would like to congratulate Dr. Bruce Webster on his retirement earlier this year! During his time as a Professor and Extension Coordinator at the Department of Poultry Science, Dr. Webster specialized in Poultry behavior, animal welfare, commercial layer management, and environmental management. He has written a multitude of articles and had given oral presentations for scientists and industry professionals alike regarding poultry behavior and welfare. During his time with the department, Dr. Webster made an enormous impact on the poultry science community and industry through his research, courses, and through his dedication to public service as Cooperative Extension faculty and Extension Coordinator.

In addition, Dr. Webster recently served as one of the lead editors for the latest revision for the Guide for Agricultural Animal Care and Use in Research & Teaching. This revision was a collaborative effort between members of the Poultry Science Association, the American Animal Science Society, and the American Dairy Science Association. This document is critical to the research done not only at the University of Georgia but by researchers all over the country as it is used by universities and governments to provide oversight for how research is conducted. Without this document, researchers would have to default to largely rodent-based documents. This is another example of how Dr. Webster's work has positively impacted the poultry industry and beyond. We are very fortunate to have had the opportunity to work with Dr. Webster, and we wish him the best of luck in his retirement!



## Save the Date:

**August 29th** GA Poultry Federation Strong 2020 Event

**September 21st** GA Layer Conference

**September 23rd** GA Broiler Conference

**October 2nd** Alumni Homecoming Tailgate @ Southern Brewing Co.

**October 2020** GA Poultry Federation Sporting Clays Tournament

**November 9th** GA Poultry Federation Legacy Golf Tournament

**November 2020** Cold Weather Management Workshop/ Webinar

**All events are contingent upon COVID-19, University, and partner organization regulations.**

**Details are subject to change.**

**For updated information, please visit [poultry.caes.uga.edu](http://poultry.caes.uga.edu).**