

# The Poultry Informed Professional

ISSUE 150

SUMMER 2023

Clinical Faculty Karen Grogan, DVM, MAM, ACPV Jenny Nicholds, DVM, MAM, ACPV

Current MAM Senior Students Reece Bowers, DVM Maurice Raccoursier, DVM, MS Ashley Hallowell, MS, VMD

Current MAM Junior Students Tiffani Allen, DVM Jason Sousa, DVM Cole Taylor, DVM

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Poultry Diagnostic and Research Center College of Veterinary Medicine UNIVERSITY OF GEORGIA

### > Interview with Dr. David French – a reflection on his career

Interviewed by Maurice Raccoursier

- Tell us about your background and how you got into Avian medicine.

I grew up on a poultry farm in Felton, Delaware. As a teenager we moved to Canton, Georgia where my father took a job as broiler manager for Central Soya, and I would work odd jobs during the summer at the feed mill and in live production. One of my early jobs was bleeding turkeys that had been exposed to HVT so that the serum could be used to vaccinate the broilers for Marek's Disease. Following graduation from UGA with a BS in Environmental Health, I taught high school science in Athens Georgia for two years before starting Vet School at UGA. Upon completion of the DVM, I made the best decision of my life, to go an additional 18 months for the MAM program at PDRC to specialize in avian medicine.

- What is your fondest memory from when you were student in the MAM program? The bond that is formed with others when going through such a program at PDRC stands out as the most significant experience. Friendships formed at that point and time with my classmates in the MAM program, and other graduate students at PDRC have lasted a lifetime.
- You have had a long career in the poultry industry, what during your career are the discoveries/research/innovations which have had the greatest impact? Without a doubt, the two most significant discoveries that have had the greatest impact are the development of recombinant vaccines, and the use of PCR for diagnostics. A case of respiratory disease in the field used to take forever to workup with virus isolation and identification of the specific strain of bronchitis involved. Now we can run a bank of infectious bronchitis primers and have an answer in 3 days. I am sure that whole genome sequencing is just around the corner that will add even more information.
- Congratulations for your Huvepharma Mentorship Award received in the last AAAP meeting. What advice would you give to young students to be successful as poultry veterinarians?

Two things really – first to know that a post DVM degree is just the beginning to a world of learning. You will learn more in the first two years of production, allied industry service, or other work than you did in any classroom setting. There is something about having the responsibility for your decisions resting upon your shoulders that really drives home the learning experience. Secondly, you should remember that this is a very small industry. Don't burn bridges that you will later regret. Treat everyone with respect because today's direct report may be your boss tomorrow.

- How do you see the future of the poultry industry/poultry medicine? What could be the next big discovery and challenge?

I think that Artificial Intelligence is progressing at an amazing pace and there are many applications in the world of avian medicine in diagnostics, genetics, and management. In addition, Quantum Computing which looks at biological trends on a large scale (risk assessments, environmental changes, population dynamics, and prediction of emerging disease challenges) could also develop as a significant advance in how we are better able to feed the world's population.

#### - In which area of poultry medicine do you think more research is needed?

We have an immediate need to better control the diseases that continue to challenge our industry on a global scale, such as Avian Influenza, and Virulent New Castle Disease. Realistic and fundamentally sound approaches for the successful control of foodborne pathogens such as Salmonella and Campylobacter are also in the industry's best interest.

#### What will you miss most about PDRC?

I will miss the opportunity to mentor the next generation of avian medicine professionals. Teaching in the Master of Avian Medicine program has been the most rewarding experience of my career. To touch the lives of those individuals whose life-long dream has been to experience what I have been blessed to experience in my career, and to offer encouragement and a few nuggets of information along the way, is the thing that I hold most dear and will miss the most.

#### - What is your fondest memory from your time spent at PDRC?

In addition to the positive experiences that I have had with the students, I will also always think fondly of this opportunity for the chance to work with the clinicians and researchers at the Poultry Diagnostic and Research Center. The collaboration between the clinicians and the researchers at PDRC is synergistic. Close involvement with the clinical cases that come through the PDRC diagnostic lab adds practical emphasis to the research that is done here. Proximity of the clinicians to the research adds relevance to the information that is gathered at necropsy and shared with the industry. This provides a unique environment and a brand that has gained the respect of the poultry industry around the world.

- What do you think has been your largest contribution to the poultry industry? The greatest impact is undoubtedly the small contributions that I may have made to the education and the lives of those students that I have been fortunate enough to work with while at PDRC. In their hands, rests the future of this incredible industry.
- What advice do you have for the incoming clinicians?
  There is no better use of your time with students than time spent in poultry houses, hatcheries, and processing plants.

#### What are your hobbies and what are you looking forward to the most in your retirement?

I plan to do a little consulting (half-time) for about two more years, and then ease into total retirement. Time will be spent teaching grandchildren how to fish, learning to speak Spanish, traveling with my wife, and experimenting with pasta recipes.

# **Celebration of David French's Retirement**

On behalf of PDRC faculty and Staff, we would like to thank Dr. David French for his efforts over the past few years to support the MAM program and our diagnostic service. His years of experience in the poultry industry provided valuable knowledge to students in our two training programs and visiting veterinary externs.

We all celebrated his retirement on June 30 with a small party at PDRC





# Wishing good luck to the MAM 2023 candidates as they start externships.

#### **Ashley Hallowell**

Ashley was born and raised in Philadelphia, Pennsylvania, second home of the Philly cheese steak (first home is Blind pig – Athens), Wawa and hoagies (aka subs).

#### **Reece Bowers**

Reece is from Dawsonville, home of famous NASCAR drivers and moonshine!

#### **Maurice Raccoursier**

Maurice was born in Santiago, Chile. Where you can find the finest wines and the Andes mountains



We appreciate the time spent at PDRC, one of the best experiences in our lives, we loved to be part of a great team who shared with us all the knowledge acquired over the years. It's not goodbye, it's see you later.

# Let's get to know the new MAMs - 2024 Interview Provided by: Maurice Raccoursier Tiffani Allen

#### Tiffani is a proud alumnus of Mississippi State University and graduated with a Bachelor of Science in Poultry science with a concentration in pre-veterinary medicine in 2019. During her time at MSU, she worked as an undergraduate research assistant in a poultry BSL-2 laboratory. She went on to conduct and present her laboratory research at the International Poultry Scientific Forum in 2018. Tiffani continued her education at the University of Georgia, College of Veterinary Medicine where she was accepted into Georgia Veterinary Scholars Program and received an NIH Office of Research Infrastructure Programs Grant. She went on to present her research detailing Infectious Bronchitis Virus at several veterinary symposiums. Tiffani received her Doctor of Veterinary Medicine from the University of Georgia



in 2023. Upon graduation, she was accepted as a Master of Avian Medicine candidate at the University of Georgia. Outside of working with poultry, Tiffani enjoys cooking, shopping, and spending time with family and friends.

### **Jason Sousa**

Jason is a California native, but has called multiple southern states home including Mississippi, Texas, and now Georgia. After discovering a passion for poultry in high school through involvement in the National FFA Organization, Jason pursued a degree in Poultry Science at Mississippi State University, graduating in 2019. Jason then attended Texas A&M University for veterinary school, graduating in May 2023. As one of the newest Master of Avian Medicine candidates at UGA, he intends to use his time at the PDRC to further his proficiency as a poultry veterinarian and investigate emerging conditions and novel interventions in the poultry industry. Outside of poultry, Jason enjoys rock climbing, playing piano, and spending time with his three cats.



# **Cole Taylor**

Cole is originally from Pittsburgh, Pennsylvania and attended West Virginia University where he received a Bachelor of Science in Animal Nutritional Sciences in 2019. During his years at West Virginia University, he was first exposed to and grew an interest in poultry production as well as feed manufacturing. Upon graduation he attended and received his Doctor of Veterinary Medicine degree in 2023 from The Ohio State University with the focus of poultry production medicine. During his time there he worked with several parts of the poultry industry ranging from broilers, layers and turkeys across the United States in various externships and internships. He is very excited to be at the University of Georgia Poultry Diagnostic and Research Center as a Master of Avian Medicine Candidate to receive a formal poultry training and improve his understanding of poultry diseases and management. As a poultry veterinarian he hopes to support poultry growers and integrators in the



constant challenge of providing a safe, consistent food supply. In his free time Cole is an avid fisherman, kayaker, custom fishing rod builder as well as being a very passionate college football fan.

## Interesting Topics at ECVC 2023

**Summary Provided by: Maurice Raccoursier** 

For the first time, the MAM students presented a group presentation at the Emerald Coast Veterinary Conference (ECVC). Ashley presented the background of the projects and material and methods, Maurice the pre and post molting production data and Reece the pre and post molting serology titers.

# Serological response of broiler breeders vaccinated post-molt and their progeny: reovirus and infectious bursal disease.

L. P. Avila§, M. A. Raccoursier<sup>+</sup>, A. Hallowell<sup>+</sup>, E. R. Bowell<sup>+</sup>, H. J. Mason§, C. Aranibar<sup>‡</sup>, J. A. Nicholds<sup>+</sup>, J. D. French<sup>+</sup>, E. M. Shepherd<sup>+</sup>, and J. L. Wilson§<sup>\*</sup>

§University of Georgia Department of Poultry Science, Athens GA, USA, 30602 †University of Georgia Department of Population Health, Athens GA, USA, 30602 ‡Wincorp Int., Medley, FL, USA, 33178

\*Corresponding author: jeannaw@uga.edu

Journal of Applied Poultry Research; https://doi.org/10.1016/j.japr.2023.100368

When necessary, primary breeders and integrators molt broiler breeder hens to induce a second laving cycle. To protect breeders against Newcastle and bronchitis and provide progeny with maternal antibodies against reovirus (REO) and infectious bursal disease (IBD), it is common to immunize them prior to the first laying cycle with a four-way inactivated vaccine. The objective was to determine if molted breeders require additional vaccination to increase their antibodies against IBD and REO and those of the progeny. Ross 308 AP (Aviagen) hens of 63 wk of age were molted by providing 100 % ground soybean hulls for 10 days. At 9 wk post-molt, half were vaccinated with a four-way vaccine and half remained unvaccinated. Spike YP males were introduced after vaccination. Hen titers were measured pre-molt, prior to vaccination, and 3 wk post-vaccination. Chicks were hatched from both treatment hens. Vaccination slowed the BW gain of breeders ( $P \le 0.087$ ) and eqg production onset ( $P \le 0.095$ ), although egg production was similar between groups at the end of the study (P = 0.230). Molted hens had 34, and 32 % less IBD and REO titers respectively compared to pre-molt samples (P < 0.001). Vaccinating molted hens increased IBD titers by 81 % compared to those unvaccinated (P < 0.001). Maternal vaccination increased progeny titers for IBD and REO (P < 0.001) and reduced early mortality during incubation (P = 0.021). In conclusion, it is recommended to re-vaccinate molted breeders to increase both hen and progeny IBD and REO antibodies.





**Figure 1.** Egg production of breeder hens from both treatment groups during the induced molting and after vaccination at wk 73. Significant differences were denoted with (\*\*) when  $P \le 0.05$  and tendencies (\*) when  $0.05 < P \le 0.10$ . Vaccinated hens had a lower egg production from wk 75 to 76 (P  $\le 0.021$ ), and a similar tendency was observed at wk 77 (P = 0.095). However, egg production was similar between treatment groups at wk 78, when the experiment concluded (P = 0.230).

Variable <sup>1</sup>	Titers	
	IBD	REO
Molting effect on hen titers. GMT		
Pre-molt (wk 64)	6.041ª	5.313ª
Post-molt (wk 73)	3,967 <sup>b</sup>	3,619 <sup>b</sup>
SE	258	298
P - Value	< 0.001	< 0.001
Vaccination effect on molted hen titers at wk 76, GMT		
Unvaccinated	6,074 <sup>b</sup>	5,375
Vaccinated	11,002ª	6,034
SE	502	620
P - Value	<0.001	0.454
Vaccination effect on molted hen titer CV at wk 76, %		
Unvaccinated	53.3ª	76.6
Vaccinated	34.9 <sup>b</sup>	58.6
SE	4.0	18.0
P - Value	0.032	0.524
Maternal vaccination effect on chick titers, GMT		
Pre-molt (wk 63 hatch)	974 <sup>b</sup>	1,243 <sup>ab</sup>
Unvaccinated	815 <sup>b</sup>	788 <sup>b</sup>
Vaccinated	2,784ª	1,736ª
SE	284	214
P - Value	<0.001	<0.001
Maternal vaccination effect on chick titer CV. %		
Unvaccinated	66.1	80.5
Vaccinated	69.2	90.1
SE	6.3	6.3
P-Value	0.847	0.309
Hen-to-chick titer transfer %		
	13 ⁄b	15 Ob
	10.4"	12'0°
vaccinated	25.4ª	28.9ª
SE	0.9	3.5
<i>P</i> - Value	0.001	0.047

**Table 1.** Infectious bursal disease (IBD) and reovirus (REO) blood titers of hens and their offspring.

<sup>a,b</sup>Means with different superscripts within rows denote significant differences ( $P \le 0.05$ ). <sup>1</sup>Three hen pens were vaccinated with a four-way inactive vaccine Avipro<sup>®</sup> 442 ND-IB2-BTO2-REO (Elanco, Greenfield, IN, USA) and the remaining 3 pens were injected adjuvant as a control.



Figure 3. Titers (GMT) at each time point for IBD and REO

**Figure 2.** Titers (GMT) at each time point for IBD and REO. Vaccinating molted hens increased IBD titers by 81 % and REO titers by 12% compared to those unvaccinated.

# Useful Links:

PDRC Diagnostic Services Homepage

PDRC Diagnostic Lab Test & Fee Catalog

PDRC Diagnostic Lab - Domestic Submission Form