

# CURRICULUM VITAE

## E. DAVID PEEBLES

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## EDUCATION

### **Doctor of Philosophy - Physiology, May 1986**

North Carolina State University, Dept. of Poultry Science, Raleigh, NC, 2/82-12/85.  
Advisor: Dr. John T. Brake  
GPA: 3.82  
Minor: Poultry Science  
Dissertation: Peebles, E. David, 1986. Factors affecting broiler hatching egg production.

### **Master of Arts - Biology, December 1981**

College of William and Mary, Dept. of Biology, Williamsburg, VA, 9/79-12/81.  
Advisor: Dr. Eric L. Bradley  
GPA: 3.56  
Thesis: Peebles, E. D., 1981. The relationship of serum thyroxine to the reproductive capabilities of prairie deermice from laboratory populations.

### **Bachelor of Science - Marine Biology, May 1979**

University of South Carolina, Dept. of Marine Science, Columbia, SC, 1/76-5/79.  
Cum Laude

### **College, Secondary and Primary Education**

Colorado State University, Ft. Collins, CO, 9/74-12/75.  
Thomas Jefferson High School, Denver, CO, diploma with honors (5/74).  
Longmont Junior High School, Longmont, CO.  
Southern Hills Junior High School, Boulder, CO.

## **EXPERIENCE**

### **Non-Academic Positions Held Prior to Faculty Appointment**

Research Physiologist (Animal), USDA-ARS Post-Doctoral Fellowship, Southeast Poultry Research Laboratory, Genetics Unit; Adjunct Research Associate, University of Georgia, Athens, GA (1/86-12/87).

### **Faculty Experience**

Assistant Professor (81% teaching, 19% research appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 1/88-7/93.

Associate Professor (82% teaching, 18% research appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 7/93-7/98.

Tenure granted by Mississippi State University, 8/93-present.

Level I appointment to the Graduate Faculty of Mississippi State University, 3/95-11/12.

Level I reappointment to the Graduate Faculty of Mississippi State University, 11/12-present.

Professor (82% teaching, 18% research appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 7/98-10/10.

Adjunct Professor appointment with the College of Veterinary Medicine (Poultry Research Program in the Department of Basic Sciences) at Mississippi State University, 10/16/98-present.

Professor (66% teaching, 34% research appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 11/10-5/11.

Professor and Interim Head (57% teaching, 34% research, 9% administration appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 5/11-2/12.

Professor (57% teaching, 43% research appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 2/12-10/12.

Professor (35% teaching, 54% research, 11% academic administration appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 10/12-3/19.

Professor (46% teaching, 54% research appointment), Department of Poultry Science, Mississippi State University, Mississippi State, MS, 3/19-present.

### **College and University Academic Committees**

Mississippi State University Undergraduate Council, 1992-1997.

Mississippi State University Nuclear Energy/Laboratory and Radiological Safety Committee, 1996-2000.

Mississippi State University Review Committee for 1997 Otilie Schillig Special Teaching Projects Program proposals (ad hoc), 3/3/97-4/10/97.

Mississippi State University Adaptive Biotechnology Committee, 1997-2000.

Mississippi State University Science Advisory Committee, 1997-2000.

Mississippi State University, Mississippi Agricultural and Forestry Experiment Station Committee for Management of Funds Associated with Memorandum of Agreements (ad hoc), 1/1999-3/1999.

Mississippi State University College of Agriculture and Life Sciences Promotion and Tenure Committee, 10/00-6/04.

Mississippi State University, College of Agriculture and Life Sciences Graduate Committee (ad hoc), 4/2001-9/2001.

Mississippi State University Academic Review Board, 2001-2003.

Member of Mississippi State University 2006 Fulbright Summer Pre-Academic Program Committee, 1/2006-8/2006.

Mississippi State University Graduate Student Association Doctoral and Master's Research Assistant of the Year Screening Committee, 2003-2008, 2010.

Mississippi State University Hazardous Waste Management Committee, 2000-2009.

Mississippi State University Life Sciences and Biotechnology Institute (LSBI) taskforce committee (ad hoc), 1/1/2007-12/31/2007.

Mississippi State University Office of Graduate Studies (IMPETUS-PGE) steering committee, 1/1/2007-12/31/2007.

Mississippi State University Radiological, Chemical, and Laboratory Safety Committee, 2000-2003.

Mississippi State University Committee on Courses and Curricula, 3/2010-5/2013.

Mississippi State University College of Agriculture and Life Sciences Committee on Courses and Curricula, 8/2012-7/2013.

Mississippi State University Ethics Review Committee (ad hoc), 10/2012-12/2012.

Mississippi State University, College of Agriculture and Life Sciences and Mississippi Agricultural and Forestry Experiment Station Promotion and Tenure Committee (Co-Chair), 9/15/20-12/15/20.

Member of Mississippi State University Institutional Animal Care and Use Committee (IACUC), 6/2021-present.

Mississippi State University, College of Agriculture and Life Sciences and Mississippi Agricultural and Forestry Experiment Station Promotion and Tenure Committee (member), 11/12/21-12/13/21.

### **Administrative Experience**

Member of Production of Poultry RPM Work Group, 1/88-9/93.

Committee member of Mississippi State University Animal Physiology Interdisciplinary Graduate Program, 9/88-present.

Member of Membership Committee for the Poultry Science Association (1993-1996)

Chairman of Resolutions Committee for the Southern Poultry Science Society (1994, 1995)

Coordinator and committee member of Interdisciplinary Genetics Graduate Program, Mississippi State University, 9/89-9/10.

Vice-chairman of Southern Regional Poultry Breeding Project (S-233; DC 97-07), 10/95-9/97.

Chairman of Southern Regional Poultry Breeding Project (S-233; DC 97-07), 10/97-9/99.

Associate Journal Editor for *Poultry Science*, 8/97-7/00, 8/01-7/04, 8/04-7/07, 1/15-1/16.

Member of Priority and Planning Group (Poultry and Products), 1/26/99-1/25/04.

Member of Editorial/Review Board for the *Journal of Applied Poultry Research*, 8/01-present.

Subject or Section Editor (Breeding and Hatcheries section) for the *Journal of Applied Poultry Research*, 7/12-7/16.

Coordinator of Poultry Science (Mississippi State University Poultry Science Department and CVM, USDA-SCPRL, and state poultry industry) seminar series, 3/00-5/03.

Vice-chair of the Agriculture and Plant Science Division of the Mississippi Academy of Sciences, 2/10-2/11.

Co-chair of the Agriculture and Plant Science Division of the Mississippi Academy of Sciences, 2/12-2/13.

Member of Poultry Science Association Resolutions Committee, 2007-2010.  
 Chair of Poultry Science Association Resolutions Committee, 2010-2013.  
 Member of Southern Poultry Science Society Resolutions Committee, 2012-2013.  
 Chair of the Agriculture and Plant Science Division of the Mississippi Academy of Sciences, 2/11-2/12.  
 Professor and Interim Head of the Mississippi State University Poultry Science Department, 5/16/11-2/05/12.  
 Member of the Mississippi Poultry Association Board of Directors (5/16/11-2/05/12).  
 Member of the Mississippi Board of Animal Health (5/16/11-2/05/12).  
 Member of the United States Poultry and Egg Association Poultry Science Education Funding Committee (5/16/11-2/05/12).  
 Member of the United States Poultry and Egg Association Harold E. Ford Foundation Board of Directors (5/16/11-2/05/12).  
 Member of the Mississippi Poultry Association Research and Education Committee (1/16/12-1/16/14).  
 Member of Poultry Science Association Membership/Professional Development Committee, 2013-2016.  
 Member of Poultry Science Association Constitution Committee (7/29/15-7/28/16).  
 Member (Director-at-Large #1) of Poultry Science Association Board of Directors (7/29/15-7/25/18).  
 Poultry Science Association Board of Directors Liaison to the following award committees:  
     Hy-Line International Research Award (each year)/PSA Early Achievement Award for Research (even years), and National Turkey Federation Research Award (even years)/Maple Leaf Farms Duck Research Award (odd years) (7/29/15-7/28/18).  
 Poultry Science Association (PSA) Board of Directors Liaison to the Committee on Environmental Quality (7/29/16-7/28/17).  
 Co-Organizer and Co-Chair of 2016 PSA Annual Meeting symposium entitled “Avian Embryo Nutrition and Incubation”.  
 Member of Poultry Science Association American Egg Board and Hy-Line International Research Award committees (7/29/15-7/28/16).  
 Member of Poultry Science Association sub-committee to evaluate poster guidelines and abstract submission and review processes for PSA annual conferences (6/12/17-7/7/17).  
 Member of Strategic Plan Progress Committee for the Poultry Science Association (1/16/18-7/26/20).  
 Service as Champion for sub-objective entitled “Establish effective working relations with key global poultry organizations by 2020”, of Poultry Science Association Strategic Plan Initiative (4/24/18-7/26/20).

### **Teaching Experience**

Graduate Teaching Assistant, Department of Biology, College of William and Mary, 9/79-5/81.  
 Instructor for Introductory Biology and Zoology Laboratories.  
 Guest Lecturer and Laboratory Instructor for courses in: Avian Physiology [PO 405, North Carolina State University (NCSU); PS 601, University of Georgia (UGA)] and Incubation and Hatchery Management (PO 422, NCSU).  
 Instructor for Genetics courses: Genetics I [GNS/BIO/PO 3103; 1/88-present at Main (Starkville) campus, and 8/29/88-12/16/88 at Meridian Center campus], and Genetics II (GNS 6102; 8/89-12/89 at Main campus), Mississippi State University (MSU).  
 Instructor for Poultry Science Department Undergraduate Seminar course (PO-3011, 3021, 4031, and 4041), 8/21-12/21.

## Advising Experience

### Major Advisor for Masters-level Graduate Students-30

- Eric H. Miller (Major: Poultry Science; Minor: Physiology) (elected as graduate initiate to Gamma Sigma Delta)
- Mickey A. Latour (elected as associate member to Sigma Xi)
- James D. Cheaney (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi)
- Douglas E. Link (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi)
- Tomas Pansky (Major: Poultry Science; Minor: Poultry Physiology) (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi; recipient of 1996 MSU Masters Level Outstanding International Graduate Student Award)
- Charles D. Zumwalt (Major: Poultry Science; Minor: Agricultural Economics) (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi; recipient of 1994 Maurice Stein Graduate Student Fellowship)
- Steven M. Doyle (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi)
- Abrani Sulaiman (MS; Major: Poultry Science; Minor: Physiology) (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi)
- Christopher W. Gardner (elected as associate member to Sigma Xi)
- Matthew R. Burnham (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi)
- Melanie K. S. Jones (Major: Poultry Science; Minor: Physiology and Biological Sciences) (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi; recipient of 2001 Sigma Xi Graduate Student Award, and recipient of 2001 Master's level MSU Graduate Student Association Teaching Assistant of the Year Award)
- Tiffany N. Cannon (Genetics major; non-thesis option) (elected as graduate initiate to Gamma Sigma Delta)
- Evelina Y. Basenko [secretary of MSU Graduate Student Association (2002-2003); elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi; and recipient of 2003 Master's level MSU Graduate Student Association Teaching Assistant of the Year Award]
- Anne M. Vance (Major: Agriculture; Concentration: Poultry Science) (elected as associate member to Sigma Xi)
- Jarred P. Tanksley (Major: Poultry Science)
- Sang Won Park (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi; and recipient of 2005 Masters level MSU Graduate Student Association Research Assistant of the Year Award)
- Shelia B. Cagle (elected as graduate initiate to Gamma Sigma Delta; and recipient of 2006 Master's level MSU Graduate Student Association Teaching Assistant of the Year Award)
- Kristin A. Viscione (elected as associate member to Sigma Xi)
- Crystal L. Allgood (elected as graduate initiate to Gamma Sigma Delta)
- Brenna M. McGruder (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi; recipient of 2008 Sigma Xi Master's level Graduate Student Award)

Madhusudhanan M. Keralapurath (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi)

Anberitha T. Matthews (elected as associate member to Sigma Xi, and recipient of 2010 Sigma Xi Master's level Graduate Student Award)

Adebayo O. Sokale (elected as graduate initiate to Gamma Sigma Delta)

Abiodun Bello (Major: Agriculture; Concentration: Poultry Science) (2010 undergraduate initiate to the Honor Society of Phi Kappa Phi)

Opeyemi Christiana Olojede (elected as undergraduate and graduate initiate to Gamma Sigma Delta; and on 4/7/2013, inducted into the MSU Alpha Chapter of the Phi Kappa Phi Honor Society)

Oluwaseun Ayobami Durojaye (Major: Agriculture; Concentration: Poultry Science)

Peter Olawale Ishola (Major: Master of Agriculture in Agricultural Science; Concentration: Poultry Science)

Ayoub Mousstaaid (Major: Agriculture; Concentration: Poultry Science) [elected as graduate initiate to MSU Chapter of Gamma Sigma Delta, and recipient of 2021 MSU Chapter of Gamma Sigma Delta Graduate Scholarship (\$500.00)/Award of Merit]

Lauren L. Lindsey (Major: Agriculture; Concentration: Poultry Science) (elected as graduate initiate to MSU Chapter of Gamma Sigma Delta; recipient of 2020 College of Arts and Sciences Outstanding Teaching Assistant Award)

Sethulakshmi Kattupparayil Sashidha (Major: Agriculture; Concentration: Poultry Science)

#### **Minor Advisor for Masters-level Graduate Students-1**

Lisa M. Zegment-Reed (Major: Genetics)

#### **Major Advisor for Doctoral-level Graduate Students-8**

Mickey A. Latour [elected in 1990 for membership in the Beta Biological Honor Society; elected in 1995 as graduate initiate to Gamma Sigma Delta; and recipient of 1994 (3/23/94) Sigma Xi Graduate Student Award]

Matthew R. Burnham (Major: Physiology; Minors: Statistics and Biology) [elected as associate member of Sigma Xi (1999); president of MSU Graduate Student Association (1999-2000); senator and elections committee chair of MSU Graduate Student Association (2001-2002); recipient of 2000 and 2002 Sigma Xi Doctoral Level Graduate Student Award; and recipient of MSU Graduate Student Association 2000 Outstanding Leadership Award, 2002 Doctoral level Research Assistant of the Year Award, and 2002 Member of the Year Award]

Radhakrishna Pulikanti (Major: Life Sciences-Animal Physiology) (elected as graduate initiate to Gamma Sigma Delta and as associate member to Sigma Xi; recipient of 2011 GSA Doctoral Level Research Assistant of the Year Award)

Roymon Jacob (elected as graduate initiate to Gamma Sigma Delta, associate member to Sigma Xi, and as graduate initiate to Phi Kappa Phi; recipient of 2013 Gamma Sigma Delta Doctoral Level Graduate Scholarship Award)

Adebayo O. Sokale (elected as graduate initiate to Gamma Sigma Delta)

Katie Elaine Collins (recipient of the 2015-2016 Graduate Teaching Award of Merit (Doctoral Category) issued by the Mississippi State University College of Agriculture and Life Sciences, in association with the North American Colleges and Teachers of Agriculture.

Syedabolghasem Fatemi

Abdulmohsen H. Alqhtani

#### **Hosted Postdoctoral Scientists and Visiting Scholars-4**

Lumu Li (Visiting Scholar; Anhui Agricultural University, Hefei, China) 5/95-10/95

Wei Zhai (Postdoctoral Scientist; Purdue University) 8/09-7/11

Hai-Jun Zhang (Visiting Scholar; MSU Affiliate Status; Chinese Academy of Agricultural Sciences, Beijing, China) 8/05/16-8/24/17

Seyedabolghasem Fatemi (Postdoctoral Scientist; Mississippi State University) 12/16/19-5/31/20;  
8/16/20-8/15/21; 8/16/21-8/15/22

#### **Undergraduate Directed Individual Study (DIS), Honors Program, and High School Student Projects-20**

Kathy M. Vaughn (DIS) 1/92-12/93

S. Elaine Broome (DIS) 1/93-7/93

Brian Stevens (DIS) 8/94-5/95

Lekishia Moffett (MSMS) 8/94-5/95

Mariam Tahai (SHS) 1/95-5/95

Sherman Miller (DIS) 1/96-7/96

Sue Ann Hubbard (DIS) 1/97-7/97

Erica Snowden (Honors Program) 8/99-12/99

Dale D. Pillow (Honors Program) 8/03-12/03

Christine L. Wolgemuth (Honors Program) 1/07-5/07

Emily C. Williams (Honors Program) 8/09-12/09

Abiodun Bello (Honors Program) 5/10-8/10

Ivey M. Gibson (Honors Program) 8/11-12/11

Olatunde Olapeju Olaitan (DIS) 1/13-5/13

Anna Carolina Ferreira Caixeta (DIS) 8/14-12/14

Chrysta Beck (Honors Program) 8/14-3/15

Lauren L. Lindsey (Honors Program DIS) 1/18-5/18

Ethan B. Dehart (DIS) 1/19-5/19

Nathaniel Miller (DIS) 1/20-5/20

Noelle Forcier (DIS) 1/21-5/21

#### **Undergraduate Student Internships-3**

Soraya Silva (2/11-2/12)

Vanusa de Souza Godoy (2/12-2/13)

Nayara de Oliveira Pelici (2/13-2/14)

#### **Graduate Student Internships-1**

Tiago Birro Oliveira (12/13-12/14)

### **Graduate Directed Individual Study (DIS) Projects-9**

Abrani Sulaiman 8/96-12/96  
 Janice N. Mitchell 5/02-6/02  
 Anne M. Vance 8/02-12/02  
 Jarred P. Tanksley 8/03-12/03  
 Shelia B. Cagle 6/05-8/05  
 Kristin A. Viscione 8/06-12/06  
 LaShonda S. Robertson 6/08-8/08  
 Anberitha T. Matthews 1/09-5/09, 8/09-12/09  
 Oluwaseun A. Durojaye (5/16-6/16)

### **Graduate Committee Memberships-54**

Philip A. Stayer [Masters: (Non-Thesis) Food Animal (CVM-VMS)]  
 Justin L. Robbins (Masters: Poultry Science)  
 Mehmet Karaca (Masters: Genetics)  
 John E. Huston (Masters: Genetics)  
 Chad L. Stocks (Masters: Genetics)  
 Yusrizal (Masters: Poultry Science)  
 Trent Smith (Masters: Genetics)  
 Clinton R. Young (Masters: Genetics)  
 David D. Smith [Masters: (Non-Thesis) Food Animal (CVM-VMS)]  
 Amanda Masholie (Masters: Genetics)  
 Matthew M. Radde (Masters: Genetics)  
 James E. Hood (Masters: Poultry Science)  
 Ayse Gumus Karaca (Doctoral: Physiology)  
 Holly M. Parker (Masters: Poultry Science)  
 Holly M. Parker (Doctoral: Animal Physiology)  
 Todd A. Parker (Doctoral: Biochemistry and Molecular Biology)  
 Madhankumar Sathyamoorthy (Masters: Genetics)  
 Guei-Jr Liang (Masters: Genetics)  
 Brian L. Taylor (Masters: Genetics)  
 Monette F. Upshaw (Masters: Genetics)  
 Phillip M. Vandevere (Masters: Genetics)  
 John A. Etheridge (Masters: Genetics)  
 Coesha A. Fairley (Masters: Genetics)  
 James D. Wilbourn (Masters: Poultry Science)  
 Scharidi J. Barber (Masters: Poultry Science)  
 Alan J. Rodriques (Masters: Genetics)  
 Lisa M. Zegment-Reed (Masters: Biology)  
 Timothy A. Gardner (Masters: Genetics)  
 Christopher M. Page (Masters: Poultry Science)  
 Pradeep Kumar Reddy Dumpala (Masters: Poultry Science)  
 Robert T. Martin (Masters: Genetics)  
 Jessica L. Benoit (Masters: Agriculture-Poultry Science)

LaShonda S. Robertson (Masters: Agricultural Life Sciences-Genetics)  
 Ercan S. Unlu (Doctoral: Life Sciences-Genetics)  
 Shernica L. Ferguson (Masters: Agricultural Life Sciences-Genetics)  
 Lindsay M. Stevenson [Doctoral: Physiology (Auburn University)]  
 Stacey N. Homen (Masters: Agriculture-Poultry Science)  
 Xiaojun Wang (Masters: Agricultural Life Sciences-Genetics)  
 Michael R. Dooley (Masters: Agriculture-Poultry Science)  
 Kamilah E. Grant (Doctoral: Life Sciences-Genetics)  
 Hui-Wen Tsai (Masters: Agricultural Life Sciences-Genetics)  
 Leonel Mejia (Doctoral: Agricultural Sciences-Poultry Science)  
 Charles J. Matyi (Doctoral: Molecular Biology)  
 Derrick L. Everett (Doctoral: Agricultural Sciences-Poultry Science)  
 Melissa D. Haines (Masters: Agriculture-Poultry Science) 7/12  
 Xi Wang (Masters: Agriculture-Poultry Science) 5/14  
 Priscila Santa Rosa (Masters: Agriculture-Poultry Science) 8/14  
 Xi Wang (Doctoral: Agricultural Sciences-Poultry Science) 1/15-12/17  
 Shailesh Gurung (Masters: Agriculture-Poultry Science) 12/15-8/17  
 Reshma Ramachandran (Doctoral: Agricultural Sciences-Poultry Science) 12/15-5/18  
 Kacey O'Donnell (Masters: Agriculture-Poultry Science) 8/16-present  
 Misaki Cho (External Examiner) [Doctoral: Agricultural, Food and Nutritional Sciences Department in  
 the Faculty of Agricultural, Life and Environmental Sciences (University of Alberta)] 1/17-8/17  
 Beyoung (Bo) Zhang [(Masters) Major: Agriculture-Poultry Science; Minor: Statistics] 7/17-9/20  
 Linan Jia (Doctoral: Agricultural Sciences-Poultry Science) 1/17/19-12/31/21

### **Supervised Supplemental Instructors for Genetics I course**

Kayla Bannister (Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020)  
 Noelle Forcier (Fall 2020, Spring 2021)  
 Maddie Pinero (Fall 2021, Spring 2022)  
 Trevor Holland (Fall 2022)

### **Research Experience**

Member of S-289 and DC-97-07 Southern Regional (Multi-State) Poultry Breeding Project, 10/99-9/04.  
 Member of S-233 and DC 97-07 Southern Regional (Multi-State) Poultry Breeding Project, 3/94-9/99.  
 Research in Poultry Physiology, Poultry Science Department, Mississippi State University, 1/88-present.  
 Research Physiologist (Animal), USDA-ARS Postdoctoral Fellowship, Southeast Poultry Research  
 Laboratory, Genetics Unit; Adjunct Research Associate, University of Georgia, Athens, GA,  
 1/86-12/87. Designed and conducted research on hormone-growth mechanisms in broilers and  
 Japanese quail.  
 Graduate Research Assistant, Department of Poultry Science, North Carolina State University, 2/82-  
 6/85. Conducted research in broiler breeder management, reproductive and environmental  
 physiology, eggshell quality and incubation technology.  
 Thesis Research, Department of Biology, College of William and Mary, 9/79-12/81. Conducted research  
 in endocrine and reproductive physiology of prairie deer mice.

Undergraduate Research Projects, Department of Marine Science, University of South Carolina, 1/76-5/79. Research participant in marine invertebrate and vertebrate physiology.

## **Funding**

### **Funded Research Grants**

Hatch fund project (MIS-2969, Accession # 0135882): 9/1/88-8/31/93, "The effects of various factors of maternal physiology on growth, hatchability and eggshell quality in poultry." (PI).

B. C. Rodgers Co.: 5/15/91, Indian River × Arbor acres broiler hatching eggs (1,200 eggs), \$144.00 (PI).

Pioneer, Inc: 5/14/91-6/28/91, "Floor pen efficiency study using direct-fed microbial cultures on broiler performance," \$2,500.00 [coll. w/Dr. J. D. Brake (PI)].

B. C. Rodgers Co.: 4/15/92, Arbor acres × Arbor acres broiler hatching eggs (4,580 eggs), \$687.00 (PI).

Smithkline Beecham, Inc: 2/28/92-4/10/92, "The effects of Virginiamycin in withdrawal rations," \$7,350.00 [coll. w/Dr. J. D. Brake (PI)].

USDA-ARS doctoral research assistantship: 6/1/92-5/31/96, "Maternal dietary fat transfer and utilization in the embryonic and neonatal broiler chicken," \$16,500.00 [coll. w/Dr. J. D. May (PI)].

USDA-ARS-Genetics Unit (Dr. Henry L. Marks, Athens, GA): 1993, Athens-Canadian randombred hatching eggs (1,8750 eggs), \$188.00 (PI).

Southeastern Poultry and Egg Association Research Grant: 1/11/93-1/31/95, "Broiler breeder hen nutrition and its relationship to egg and chick quality", \$34,340.00 (PI).

Hatch fund project (MIS-2985; MIS-322010): 2/1/93-1/31/99, "Early post-hatch nutrition and its relationship to the nutrition of the hen." (PI).

Regional (Multi-State; S-233 and DC-97-07)/Hatch (MIS-2990; MIS-329020; CRIS Accession # 0165479) fund project: 2/1/93-10/31/99, "Genetic relationships to growth and reproduction in diverse poultry populations." (PI).

Eka Nobel, Inc.: 10/1/95-12/1/95, "Use of hydrogen peroxide in broiler drinking water", \$14,000.00 [coll. w/Dr. T. C. Chen (PI)].

Grant in support of Abrani Sulaiman (M.S. graduate student), as a participant in the Professional Human Resources Development Project administered by the Government of Indonesia, the Institute of Public Administration, and the Midwest Universities Consortium for International Activities, inc., under the guidelines established by the Indonesian Overseas Training Office. 8/95-12/96, \$12,600.00/year (PI).

- U.S. Poultry and Egg Association Research Grant (Project #239): 1/96-12/97, "Effects of incubational environment on lipid metabolism and embryogenesis in broiler hatching eggs", \$75,167.00. (E. D. Peebles and J. T. Brake, CO-PIs).
- Hatch fund project (MISV-2993): 9/15/96-12/31/01, Breeder Hatcheries Project-"Broiler chicken mortality and gluconeogenesis at hen production onset." [coll. w/Drs. R. W. Keirs and D. L. Magee (Keirs, PI)].
- MSU-MAFES FY1999 Special Research Initiative Research Grant: 1/99-12/99, "Use of a crude goat serum fraction to modulate the immune response to infectious diseases in poultry," \$16,000.00 [coll. w/Dr. K. O. Willeford (PI)].
- USDA-ARS Research Grant: SCA # 58-6406-9-016, MSU Award #001404-001, 7/1/99-4/30/04, "Determination of lipoprotein profiles of F strain MG vaccinated chickens," \$122,580.00 (PI).
- Regional (Multi-State; S-289)/Hatch (MIS-329090) fund project: 10/1/99-9/30/04, "Factors associated with genetic and phenotypic variation in poultry: Molecular to populational." [coll. w/Dr. Karl E. Nestor (Peebles, PI)].
- Jamesway Incubator Co., Inc.: 9/8/04, Jamesway Compact AVN incubator (1,232 egg capacity, \$3,095.00 (PI).
- Hatch fund project (MIS-321010): 10/1/99-9/30/04, "*Mycoplasma gallisepticum* infection, immunity, and blood and organ characteristics in commercial laying hens." (PI).
- Smith Farm, Inc. (Carriere, MS, 39426): Donation (NatureForm NOM 45 incubator with split egg dolly), 10/18/99, \$8,000.00 [coll. w/Dr. Tom W. Smith (Smith, PI)].
- MSU-MAFES FY2000 Special Research Initiative Program Grant: 1/00-12/00, "Elucidating the immunoactivity of a goat serum peptide," \$18,000.00 [coll. w/Dr. K. O. Willeford (PI)].
- Zinpro Corp.: 8/1/00-8/1/01, "Impact of dietary zinc source in broiler breeders on reproductive traits and subsequent chick viability," \$35,000.00 [coll. w/Dr. M. T. Kidd (PI)].
- Lonzagroup Corp.: 5/1/03-12/31/03, "Impact of L-carnitine on male and female broiler breeder performance," \$40,000.00 [coll. w/ Dr. M. T. Kidd (PI)], actual funds received for collaboration, \$10,000.00.
- USDA-ARS Research Grant: SCA # 58-6406-4-0102, 9/27/04-7/31/09, "Determination of eggshell micro-structural characteristics and associated physiological profiles in MG-vaccinated egg-laying chickens," \$47,993.00 (PI).
- Hatch fund project (MIS-321030): 10/1/04-9/30/09, "Determination of eggshell micro-structural characteristics and associated physiological profiles in MG-vaccinated egg-laying chickens." (PI).

Hatch fund project (MIS-322210): 11/1/04-10/30/09, "Relationships among physiological parameters and their critical levels in broiler embryos and chicks across incubation and brooding." (PI).

USDA-ARS Research Grant: SCA # 58-6406-6-0030, 3/23/06-3/22/07, "Dietary support effects on eggshell microstructure and performance subsequent to pullet and early lay period MG vaccination in egg-laying chickens," \$13,000.00 (PI).

MSU-CALS doctoral research assistantship: 6/1/07-5/31/11, "Relationships among physiological parameters and their critical levels in broiler embryos and chicks across incubation and brooding," \$20,000.00/year (4 year total = \$80,000.00) (PI).

MSU-MAFES FY2007 Strategic Research Initiative Program Grant (MIS: 322210): 1/01/07-12/31/07, "Use of practical metabolic indices across incubation and brooding in establishing the optimal performance of early nutrient restricted offspring from young broiler breeders," \$49,408.00 (PI).

AviTech, LLC: 10/29/07, Non-stackable IntelliJect in ovo injection system, \$285,000.00; AviTech IntelliJect system maintenance contract (mechanical and technical support), \$25,000.00 per annum; AviTech ManualJect in ovo injection system, \$100,000.00; AviTech IntelliSpray unit, \$15,000.00; AviTech IntelliLab unit, \$15,000.00; AviTech tool box kit (partial), \$500.00; Jamesway 5,040-egg capacity incubator unit, \$12,664.00; and Jamesway 5,040-egg capacity hatcher unit, \$11,934.00 (PI).

Phibro Animal Health Corp.: 7/7/09-7/6/10, "Effects of uninterrupted feeding of Nicarbazin from 0-28 days of age on male broiler liver glycogen concentrations," \$8,000.00 (PI).

USDA-ARS Research Grant: SCA # 58-6406-9-434, 8/01/09-7/31/10, "Physiological effects of F-strain *Mycoplasma gallisepticum* (MG) in laying hens vaccinated with MG bacterin in combination with live TS-11 MG," \$27,317.00 (PI).

MSU Shackouls Honors College Summer Undergraduate Research Fellowship for 2010: 5/1/10-8/31/10, Undergraduate Mentee, Abiodun Bello, received fellowship to conduct summer research project pertaining to commercial in ovo injection of compounds to promote broiler embryogenesis. Title of Project: Effects of *in ovo* injection of 25-hydroxycholecalciferol in broiler embryos. \$2,000.00.

USDA-ARS Research Grant: SCA # 58-6406-9-434 continuation, 8/01/10-7/31/11, "Physiological effects of F-strain *Mycoplasma gallisepticum* (MG) in laying hens vaccinated with MG bacterin in combination with live TS-11 MG," \$55,600.00 (PI).

Phibro Animal Health Corp.: 7/7/10-7/6/11, "Associated blood glucose and liver glycogen concentration changes in broilers exhibiting post-traumatic stress due to the engorgement of feed containing Nicarbazin," \$7,438.00 (PI).

Hatch fund project (MIS-322270): 10/1/10-9/30/15, "Effects of in ovo injection of metabolic compounds on hatchability and post-hatch chick performance." (PI).

USDA-ARS Research Grant: SCA # 58-6406-9-434 continuation, 8/01/11-7/31/12, "Physiological effects of F-strain *Mycoplasma gallisepticum* (MG) in laying hens vaccinated with MG bacterin in combination with live TS-11 MG," \$76,449.00 (PI).

Adisseo France S.A.S.: 11/1/12-11/30/14, Rhodimet Research Grant-"Effects of dietary methionine on meat quality and protein expression in skeletal muscle tissue of broilers," \$94,347.00 [coll. w/ Drs. W. Zhai and M. W. Schilling (Zhai, PI)].

Pfizer Animal Health, Inc.: Award # 11-01127AMVG, 015700-001; SPA Proposal # 13020142; MSU Account # 013100-320000; 9/17/12-10/31/12, "Floor pen study of broilers vaccinated for coccidiosis and treated with Bio-Cox or Monteban," \$8,200.00 (PI).

Pfizer Animal Health, Inc.: 12/15/11-present, No cost lease, supply, and service agreement for Standard Inovoject CM 54 commercial egg injection machine, (PI).

USDA-ARS Research Grant: SCA # 58-6406-9-434 continuation, 8/01/12-7/31/13, "Physiological effects of F-strain *Mycoplasma gallisepticum* (MG) in laying hens vaccinated with MG bacterin in combination with live TS-11 MG," \$68,912.00 (PI).

Pfizer Animal Health, Inc.: 4/29/12-6/3/12, "Effects of in ovo injection of commercial coccidiosis vaccine (Inovocox EM-1) on embryonic and posthatch broiler performance," \$3,000.00 (PI).

Zoetis Animal Health, Inc.: 6/20/13-8/22/13, Project Code: 70AQO, "Comparison on performance of broilers *in ovo* or subcutaneous vaccinated with different processing times between hatch and placement," \$35,690.00 (PI).

USDA-ARS Research Grant: SCA # 58-6406-9-434 continuation, 8/01/13-7/31/14, "Physiological effects of F-strain *Mycoplasma gallisepticum* (MG) in laying hens vaccinated with MG bacterin in combination with live TS-11 MG," \$63,393.00 (PI).

Zoetis Animal Health, Inc.: 3/1/14-5/3/14, "Dosage effects and turn out times on oocyst localization, oocyst cycling, and performance characteristics of *in ovo* coccidiosis vaccinated broilers," \$4,000.00 (PI).

USDA-ARS Research Grant: SCA # 58-6406-4-016, 8/05/14-8/04/15, "Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections," \$70,000.00 (PI).

NIFA Hatch fund project (MIS-322290, Accession # 228515): 1/2/12-12/31/14 (CO-PI), 1/1/15-1/2/17 (PI), "Use of nutrient, electrolyte, and stimulant combinations in commercial *in ovo* diluent to promote broiler growth."

- Mississippi Poultry Association Initiative for Poultry Industry Research Grant: MSU Grant No. G00001418, University Account No. 324311-013100-027000, Sponsor Award # 3, 4/1/15-3/31/16, "Proving the concept that commercial in ovo delivery of beneficial (probiotic) bacteria positively impacts broiler performance," \$59,873.00 [coll. w/Drs. A. S. Kiess, C. D. McDaniel, and W. Zhai (Kiess, PI)].
- USDA-ARS Research Grant: SCA # 58-6406-4-016 (Amendment 02), 8/05/15-8/04/16, MSU Award No. G00000951, "Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections," \$70,000.00 (PI).
- MSU-MAFES FY2016 Special Research Initiative Research Grant: 1/1/16-12/31/16, "Using probiotics to reduce antibiotic use in broiler production," \$49,600.00 [coll. w/X. Wang, and Drs. W. Zhai, Y. Farnell, A. S. Kiess, and K. G. S. Wamsley (Zhai, PI)].
- U.S. Poultry and Egg Association Research Grant: 1/1/16-12/31/17, "Euthanasia of recently hatched chicks and poults," \$75,000.00 [coll. w/Drs. M. Farnell, T. Tabler, R. Meyer, H. Olanrewaju, and Y. Farnell (M. Farnell, PI)].
- Chr. Hansen A/S Co.: Specific Memorandum of Agreement: MSU Grant No. G00001800, University Account No. 324348-013100-027000, Sponsor Award # 80286, 1/14/16-6/01/16, "Determining whether GalliPro Hatch can be delivered to broilers through commercial in ovo technology and the impact it has on offspring performance," \$78,699.00 [coll. w/Drs. A. S. Kiess, K. G. S. Wamsley, and C. D. McDaniel (Kiess, PI)].
- USDA-ARS Research Grant: SCA #58-6406-4-016 (Amendment 03), 8/05/16-6/30/17, "Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections," \$67,961.00 (PI).
- NIFA Hatch fund project (MIS-329260; Accession Number: 1011797; DUNS Number: 028723844): 1/2/17-1/2/22, "Physiological responses of commercial layer chicken embryos and posthatch chicks to the *in ovo* vaccination of *Mycoplasma gallisepticum*." (PI).
- Diamond V Mills, Inc.: Specific Memorandum of Agreement: MSU Grant No. G00002439, University Account No. 324446-013100-027000, 1/10/17-9/30/17, "Determination of efficacy of Diamond V Original XPC against field-strain *Mycoplasma gallisepticum* (MG) infection," \$33,989.40 (PI).
- USDA-ARS Research Grant: SCA #58-6406-4-016 (Amendment 04), 7/01/17-8/04/17, "Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections," \$81,988.67 (PI).
- USDA-ARS Research Grant: SCA #58-6406-4-016 (Amendment 05), 8/05/17-8/04/18, "Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections," \$67,829.00 (PI).

- USDA-ARS Research Grant: SCA #58-6406-4-016 (Amendment 06), 8/05/18-7/31/19, “Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections,” \$67,829.00 (PI).
- Foundation for Food and Agriculture Research Egg Tech Prize: 1/1/19-12/31/20, “*In ovo* gender determination of a chicken embryo using cell-free biomarkers and body temperature measurements, \$150,000.00 [coll. w/Drs. M. Farnell, W. Zhai, and Y. Farnell (Y. Farnell, PI)].
- USDA-ARS Research Grant: SCA #58-6064-9-014, MSU Grant #G00004539, 7/31/19-7/30/20, “Performance and physiological characteristics of poultry vaccinated and/or challenged with avian pathogenic *Escherichia coli* (APEC),” \$72,674.00 (PI).
- USDA-ARS Research Grant: SCA #58-6064-9-016, MSU Grant #G00004547, 7/31/19-7/30/20, “Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections,” \$67,829.00 (PI).
- USDA-ARS Research Grant: SCA #58-6064-9-014, MSU Grant #G00004539, continuation (Amendment 01), 7/31/20-7/30/21, “Performance and physiological characteristics of poultry vaccinated and/or challenged with avian pathogenic *Escherichia coli* (APEC),” \$72,674.00 (PI).
- USDA-ARS Research Grant: SCA #58-6064-9-016, MSU Grant #G00004547, continuation (Amendment 01), 7/31/20-7/30/21, “Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections,” \$67,829.00 (PI).
- Diamond V Mills, Inc.: General Memorandum of Agreement: University Account No. 325049-013100-027000, 8/24/20, “Unrestricted gift in support of continued research efforts concerning *Mycoplasma* research in poultry,” \$1,500.00 (E. D. Peebles, PI).
- Tyson Foods, Inc.: Donation (Marek’s Disease Vaccine), 11/9/20, \$146.00 (E. D. Peebles, PI).
- Hy-Line North America, LLC: Donation [3,960 (11cs.) layer hatching eggs], 1/18/21, \$9,900.00 (E. D. Peebles, PI).
- Zoetis Animal Health, Inc.: Donation [(10 vials) Poulvac<sup>®</sup> E. coli vaccine (5,000 doses/vial)], 4/19/21, \$1,075.00 (E. D. Peebles, PI).
- USDA-ARS Research Grant: SCA #58-6064-9-014, MSU Grant #G00004539, continuation (Amendment 02), 7/31/21-7/30/22, “Performance and physiological characteristics of poultry vaccinated and/or challenged with avian pathogenic *Escherichia coli* (APEC),” \$72,674.00 (PI).
- USDA-ARS Research Grant: SCA #58-6064-9-016, MSU Grant #G00004547, continuation (Amendment 02), 7/31/21-7/30/22, “Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections,” \$67,829.00 (PI).

USDA-ARS Research Grant: SCA #6064-32000-012-000, 9/01/21-8/31/26, NP103-Animal Health, "Intervention strategies to mitigate avian *Escherichia coli* infections and antimicrobial resistance in the poultry environment," \$318,546.00 [coll. w/Drs. J. D. Evans, S. A. Leigh, J. L. Purswell, J. E. Linhoss, G. D. Chesser, G. T. Pharr, P. Adhikari, L. Zhang, and R. Ramachandran) (E. D. Peebles, non-ARS investigator, 10 %)].

NIFA Hatch fund project (MIS-329340; Accession Number: 7001064; DUNS Number: ?): 10/29/21-6/16/23, "Effects of Marek's Disease Vaccine, and dietary and *in ovo* administration of metabolites of vitamin D sources, on the post-hatch physiology of broilers," (PI).

DSM nutritional Products of North America Corp. Grant: General Memorandum of Agreement: University Research Reserve Account No. 325049-013100-027000-329240, 1/1/22-6/1/23, "*In ovo* administration of supplemental 25-hydroxyvitamin D<sub>3</sub> (25OHD<sub>3</sub>) suspended in Marek's Disease Vaccine (MDV) diluent alone or in combination with the dietary supplementation of 25OHD<sub>3</sub> on the live performance, breast meat yield, small intestine morphology, immunity, and incidence of woody breast myopathy in Ross 708 broilers," \$20,000.00 (E. D. Peebles, PI).

USDA-ARS Research Grant: SCA #58-6064-9-014, MSU Grant #G00004539, continuation (Amendment 03), 7/31/22-7/30/23, "Performance and physiological characteristics of poultry vaccinated and/or challenged with avian pathogenic *Escherichia coli* (APEC)," \$71,874.00 (PI).

USDA-ARS Research Grant: SCA #58-6064-9-016, MSU Grant #G00004547, continuation (Amendment 03), 7/31/22-7/30/23, "Alternative *Mycoplasma gallisepticum* (MG) vaccination regimens for enhancement of protection against field strain MG infections," \$67,082.00 (PI).

### Research Grant Applications

Ralston Purina Co. Research Fellowship: 8/15/83-5/15/85, Specific Research Project Title: "Relationship of dietary ascorbic acid supplementation to broiler breeder performance," \$12,500.00/year (E. David Peebles, PI). Not funded.

MSU Office of Research 1989 Research Initiation Program Grant: 1/1/89-12/31/89, "The effects of various factors of maternal physiology on growth, hatchability and eggshell quality in poultry," \$6,000.00 (E. David Peebles, PI). Not funded.

National Science Foundation Presidential Young Investigator Award: 3/1/89-2/28/94, Major Field of Interest: Physiology (Avian), Field of Specialization: Avian reproduction and eggshell formation, Proposal # DCB-8957325, \$25,000.00/year (E. D. Peebles, PI). Not funded.

Southeastern Poultry and Egg Association Grant: 6/26/91-6/25/92, "Determination of cortisol response to high environmental temperatures as a measure of heat stress in commercial broilers," \$15,867.00 (E. D. Peebles, PI). Not funded.

National Science Foundation Graduate Research Fellowship: 7/1/89-6/30/92, \$15,000.00/year (E. D. Peebles, PI). Not funded.

- U.S. Poultry and Egg Association Research Grant: Fats and Proteins Research Foundation, Inc., and Poultry Protein and Fat Council: 1/1/98-12/31/20, "Use of supplemental fat in broiler breeder diets, \$70,078.00 (E. D. Peebles, PI). Not funded.
- MSU-DAFVM, William M. White Special Projects Awards: 3/1/98-2/29/99, "Development of experimental methodologies for altering progeny sex ratios in poultry," \$3,000.00 [coll. Dr. Kenneth O. Willeford (E. D. Peebles, PI)]. Not funded.
- U.S. Poultry and Egg Association Research Grant: 1/1/11-12/31/12, "Use of commercial *in ovo* injection of vitamin D<sub>3</sub> to promote broiler bone development," \$67,734.00 [coll. w/Drs. W. Zhai and L. W. Bennett (E. D. Peebles, PI)]. Not funded.
- U.S. Poultry and Egg Association Research Grant: 1/1/12-12/31/13, "Immunological and physiological responses of the embryonic broiler chick to the *in ovo* injection of commercial coccidiosis vaccines," \$50,208.00 [coll. w/Drs. G. T. Pharr, L. Pote, and W. Zhai (G. T. Pharr, PI)]. Not funded.
- MSU-MAFES FY2016 Special Research Initiative Research Grant: 1/1/16-12/31/16, "Cell-free molecular marker as a potential tool to determine the sex of a chicken embryo," \$50,000.00 (\$5,000.00 child account-Peebles) [coll. w/Drs. Y. Farnell, M. Farnell, T. Pechan, and W. Zhai (Y. Farnell, PI)]. Not funded.
- MSU-MAFES FY2016 Special Research Initiative Research Grant: 1/1/16-12/31/16, "High efficiency scalable microenvironment incubation system for poultry," \$50,000.00 [coll. w/Drs. S. D. Filip To and C. D. McDaniel (S. D. Filip To, PI)]. Not funded.
- MSU-MAFES FY2017 Special Research Initiative Research Grant: 1/1/17-12/31/17, "Improving egg hatching rate by inducing physiological responses during incubation using microenvironment techniques," \$50,000.00 [(coll. w/Drs. S. D. Filip To and C. D. McDaniel (S. D. Filip To, PI)]. Not funded.
- U.S. Poultry and Egg Association Research Grant: 9/1/17-6/1/18, "Determination of pH differences between the sexes for use as a quick method to sex chicken embryos," \$12,027.39 [coll. w/Drs. K. E. C. Elliott and J. D. Evans (K. E. C. Elliott, PI)]. Not funded.
- MSU-MAFES FY2020 Special Research Initiative Research Grant: 1/1/20-12/31/20, "Intervention strategies to regulate gut microbiota, lower oxidative stress, and reduce woody breast incidence in broilers," \$50,000.00 [(coll. w/Drs. W. Schilling, L. Zhang, W. Zhai, and X. Zhang (X. Zhang, PI)]. Not funded.
- U.S. Poultry and Egg Association Research Grant: 8/31/20-12/31/20, "Evaluation of in-hatcher feeding of broiler chickens," \$49,225.29 [coll. w/Dr. K. E. C. Elliott (K. E. C. Elliott, PI)]. Not funded.

USDA NIFA AFRI Program Grant for Area Priority of Novel Foods and Innovative Manufacturing Technologies (Priority code-A1364): 1/1/20-12/31/22, "Metagenomic and proteomic approach to characterize woody breast myopathy in broilers and develop strategies to reduce woody breast incidence, \$499,997.00 [(coll. w/Drs. W. Schilling, X. Zhang, L. Zhang, and W. Zhai (W. Schilling, PI)]. Not funded.

USDA NIFA AFRI Program Grant for Area Priority of Animal Nutrition, Growth and Lactation (Priority code-A1231): 1/1/21-12/31/23, "Metagenomic and proteomic approach to characterize woody breast myopathy in broilers and develop strategies to reduce woody breast incidence, \$499,997.00 [(coll. w/Drs. W. Schilling, X. Zhang, L. Zhang, and W. Zhai (W. Schilling, PI)]. Not funded.

USDA NIFA AFRI Program Grant for Area Priority of Novel Foods and Innovative Manufacturing Technologies (Priority code-A1364): 1/1/21-12/31/23, "Metagenomic and proteomic approach to characterize woody breast myopathy in broilers and develop strategies to reduce woody breast incidence, \$499,997.00 [(coll. w/Drs. W. Schilling, X. Zhang, L. Zhang, and W. Zhai (W. Schilling, PI)]. Not funded.

USDA NIFA AFRI Program Grant for Area Priority of Animal Nutrition, Growth and Lactation (Priority code-A1231): 9/1/21-8/31/24, "Metagenomic and proteomic approach to characterize woody breast myopathy in broilers and develop strategies to reduce woody breast incidence (proposal 2021-07175), \$624,455.00 [(coll. w/Drs. W. Schilling, X. Zhang, L. Zhang, and A. S. Kiess (W. Schilling, PI)]. Not funded.

USDA NIFA AFRI Foundational and Applied Science Program-New Investigator and Strengthening Seed Grant for Area of Novel Foods and Innovative Manufacturing Technologies (Priority code-A1364): 9/1/21-8/31/23, "Post-translational modifications of muscle proteins: Implications in woody breast myopathy," \$293,560.00 [(coll. w/Drs. W. Schilling, X. Zhang, and S. Suman (X. Zhang, PI)]. Not funded.

U.S. Poultry and Egg Association Research Grant: 7/1/22-6/1/23, " Genetic strain and *in ovo* water-soluble vitamin E injection impact broilers' response to oxidative stress and woody breast incidence," \$75,000.00 [coll. w/Drs. W. Schilling, X. Zhang, T. Dinh, and L. Zhang (X. Zhang, PI)]. Not funded.

### **Research Grants in Preparation**

Balchem Corp., Real Science Initiative: Specific Memorandum of Agreement: MSU Grant No. ?, University Account No. ?, 9/01/17-8/31/20, "*In ovo* and dietary feeding of organic minerals and ascorbic acid to reduce ambient ammonia, and to improve bone development as well as meat quality in broiler chickens" \$148,000.00 (CO-PI).

### **Funded Teaching Grants**

MSU Otilie Schillig Special Teaching Projects grant: 3/1/96-12/31/96, MSU acct. no. 305441-013100-011000, "Computer assisted instruction for Genetics I class," \$1,865.00 (PI).

### **Funded Recruitment Grants**

2008-2009 MSU Graduate Recruitment Assistance grant; 1/9/09, Grant was funded by the MSU Office of the Graduate School for travel to Alcorn State University for research seminar presentation and graduate recruitment purposes, \$350.00.

2012-2013 MSU Graduate Recruitment Assistance grant: 11/13/12-9/30/13, Grant entitled "Enhancing recruitment and retention in interdisciplinary field of genetics at Mississippi State University, \$1,000.00 [coll. w/Drs. E. Memili, A. Perkins, D. Ray, and T. Smith (Memili, PI)], was funded by the MSU Office of the Graduate School.

### **Funded Travel Grants**

Office of International Programs (MSU) travel grant: Travel to Ukraine, 5/8/93-5/25/93, for presentation of paper entitled "Engineering in the Poultry Industry" at the First International Symposium of Ukrainian Mechanical Engineers at Lviv Technical University, and for business and industry purposes including meetings with scientists at the Research Institute of Agriculture and Animal Husbandry of Western Regions of Ukraine, \$1,600 (PI).

MSU Office of Research and Economic Development Faculty Travel Program grant; 8/29/07, Grant was for international travel and was designated to assist faculty members with travel to professional meetings and conferences in 2008, \$1,500.00.

World's Poultry Science Association-USA branch travel grant; 11/20/07, Grant was designated to assist faculty members with travel in 2008 to the XXIII World Poultry Congress meeting in Brisbane, Australia, \$1,000.00.

2008 Graduate Student Association travel awards grant; 3/20/08, Grant was funded by the MSU Office of the Graduate School for graduate student travel, \$200.00.

2010 Travel Assistance Grant for Graduate Students; 3/24/10, Grant was funded by the MSU Office of the Graduate School for graduate student travel to scientific meetings, \$1,250.00.

World's Poultry Science Association-USA branch travel grant; 5/31/12, Grant was designated to assist faculty members with travel in 2012 to the XXIV World Poultry Congress meeting in Salvador, Bahia, Brazil, \$1,000.00.

2013 Travel Assistance Grant for Graduate Students; 10/11/13, Grant was funded by the MSU Office of the Graduate School for graduate student travel to scientific meetings, \$425.00.

2018 Travel Assistance Grant for Graduate Students (Seyedabolghasem Fatemi; PhD graduate student); 7/22/18, Award was provided by the Mississippi Poultry Association with funds from the International Paper Co. Funding covered student travel to 2018 Poultry Science Association annual meeting in San Antonio, Texas (7/22/18-7/27/18), \$1,247.34.

## Other Extramural Funding

Funds provided by a grant from the Institute of International Education for service as a committee member of the 2006 Fulbright Summer Pre-academic Program: 5/2/07, \$600.00.

2021 MSU Chapter of Gamma Sigma Delta Graduate Scholarship awarded to Ayoub Mousstaaid (M. S. graduate student): 4/6/21. \$500.00.

## Invention Disclosures/Patents

Title of Invention Disclosure: Use of temperature transponder implantation in the air cell of avian eggs for monitoring embryo metabolism and heat production, and for the subsequent programming of optimal incubational temperatures.

MSU Inventors: E. D. Peebles (65%), R. Pulikanti (25%), and W. Zhai (10%).

Mississippi State University Technology ID: 2012.0852. October 12, 2012.

Because deadline was exceeded, patent was not applied for.

Title of Invention Disclosure: Micro-environment eggs incubation technology.

MSU Inventors: S. D. Filip To (33.3%), E. David Peebles (33.3%), and Christopher McDaniel (33.3%). Mississippi State University Technology ID: 2016.0992. Date: June 6, 2016.

Title of Provisional Patent Application: Microenvironment incubation method and apparatus. MSU Inventors: S. D. Filip To (33.3 %), E. David Peebles (33.3 %), and Christopher D. McDaniel (33.3 %). Mississippi State University Technology ID: 2016.0992. Attorney Docket Disclosure No.: 2016.0992 PROV 2. Serial number 62/345,971. Date submitted to University: May 12, 2016. Serial number 62/515,752 filed with USPTO on June 6, 2017. Date patent approved: June 8, 2017. Patent Pending (USPTO). Date of closure of invention disclosure: April 9, 2018.

## Awards and Activities

### Academic Honors and Awards

Dean's List (Spring 1976-Spring 1979), USC.

President's Honor Roll (Fall 1977; Spring 1978, 1979), USC.

National Dean's List (1978).

Certificate of Merit-Graduate student research paper competition, 5th Annual Meeting of the Southern Poultry Science Society (1984).

Gamma Sigma Delta, Honor Society of Agriculture, Full Member Status (1985-present); Historian (1998-1999); Treasurer (1999-2000); Secretary (2000-2001); Vice-President (2001-2002); Chairman of Publicity Committee (2001-2002); President (2002-2003); Past-President (2003-2004).

Sigma Xi, The Scientific Research Society, Full member status (1991-present); Member of Admissions Committee (1991-1993), Chair (1992-1993); Executive Board Member-at-Large (1993-1995); Ex-officio Member of Banquet Committee (1995-1996); President-elect (1995-1996); President (1996-1997); Research Award Committee Member (1996-1997); Chairman of Faculty Awards Committee (1998-1999).

Sigma Xi Faculty Research Award (1994; 3/23/94).

American Registry of Professional Animal Scientists, Specialization in Poultry, full-professional member status (1994-2004).

Mississippi Agricultural and Forestry Experiment Station Award for Publication with Most Relevance and Potential Impact to Mississippi Agriculture (2000).

Gamma Sigma Delta Research Award of Merit (April 11, 2002).

Mississippi State University College of Agriculture and Life Sciences and Mississippi Agricultural and Forestry Experiment Station Faculty Research Award (2010).

Mississippi State University StatePride Faculty Award (2010).

Mississippi State University College of Agriculture and Life Sciences and Mississippi Agricultural and Forestry Experiment Station Laboratory Safety Award (2016).

Poultry Science Association Fellow (Class of 2019; Date of enrollment: 7/18/19).

### **Major Non-Academic Interests and Activities**

Colorado State University Pre-Veterinary Club (1975)

USC National Science Foundation Project Participant (12/77, 3/78)

USC Undergraduate Research Apprenticeship Program (1978)

NCSU Poultry Science Club (1982-1984)

NCSU Graduate Student Association (1982-1985)

NCSU Poultry Science Department Graduate Student Representative (1984-1985)

NCSU Water Polo Club (Fall 1984; Spring 1985)

Chi-Alpha Christian Fellowship, Faculty Advisor (1988-present)

Committee member of Chi-Alpha Christian Ministries for the Mississippi District (1990-1992)

Treasurer for CARE Ministries (7/91-4/94) and Starkville Christian Center (7/92-8/93)

MSU Poultry Science Club (1988-present)

Boardtown Roadrunners Club member (1989-1995); Member-at-Large (1992-1993); President-elect (1993-1994); President (1994-1995)

TAC Certified Track and Field Official (1992-present)

Member of Christian Leadership Ministries of Campus Crusade for Christ (1993-1996)

President of Fellowship of Christian Faculty and Staff for MSU (1993-1996)

Golden Triangle Running and Cycling Club member (1995-present); President (2007-2008)

Member of MSU Christian Faculty Forum (1/06-present)

Member of MSU Lady Bulldog Booster Club (2001-present)

President and communications director of MSU Christian Faculty-Staff Forum (9/10-5/21)

Member (clarinetist) of Mississippi State University and Starkville Community Band (Jan.-April; 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, and 2019)

Member (clarinetist) of Mississippi Baptist Symphony Orchestra. (Jan.-Nov.; 2018 and 2019)

Member (clarinetist) of Celebration Music Ministry Orchestra for Starkville First Baptist Church, Starkville, MS. (Jan.-Dec.; 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)

### **Professional Organization Memberships**

Agribusiness Institute (MSU)

American Registry of Professional Animal Scientists [Full member (poultry specialization); 9/94-12/04]

Asian Council of Science Editors (3/20/21-12/23/21)  
Mississippi Academy of Sciences (3/88-present)  
Mississippi Genomics Network (2/10-present)  
Mississippi Poultry Association (1/90-present)  
Poultry Science Association (1982-present)  
Southern Poultry Science Society (1982-present)  
Southern Regional Poultry Breeding Project  
World's Poultry Science Association (1987-present)

## PUBLICATIONS

### Summary

Total Career Publications: 585

Books: 1

Book Chapters: 3

Published Peer Reviewed (Refereed) Journal Articles: 212, (First author): 72, (Invited Reviews): 2

Published Abstracts and Proceedings (Scientific Presentations): 341

Bulletins: 5

Popular/Miscellaneous articles: 20

Videotapes: 1

Webinars: 2

### Textbooks

**Peebles, E. David**, (copyrighted). Study Guide for Introductory Genetics, 370 pages.

Kendall/Hunt Publishing Co., Dubuque, IA 52002-2624.

First Edition-**1995**-ISBN 0-7872-1056-0

Second Edition-**1997**-ISBN 0-7872-3669-1

Third Edition-**2003**-ISBN 0-7575-0281-4

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Fourth Edition (Fourth Revised Printing)-**2020**-ISBN 978-1-7924-5324-3 (item #453243)

### Book Chapters

**Peebles III, Edgar David** (copyrighted), **2017** (Submitted for Publication-9/30/15; Date Proof was Posted-9/23/16; Date of Release-12/19/16; Date of Publication-1/3/17). Mycoplasmosis in Egg-Laying Flocks. Chapter 50, Pages 537-546 in Egg Innovations and Strategies for Improvements. First Edition. P. Y. Hester, ed., Oxford: Academic Press, Elsevier Inc., New York, NY. ISBN 978-0-12-800879-9.

**Peebles III, Edgar David** (copyrighted), Q3, **2019** (Submitted for Publication-9/3/18; Date Proof was Posted-1/21/19; Date of Publication-11/26/19). In Ovo Development of the Chicken Gut Microbiome and its Impact on Later Gut Function, Chapter 5, Pages 95-119 in Part 1: Understanding the gastrointestinal tract, in Book: Improving Gut Health in Poultry. First Edition. S. C. Ricke, ed., Burleigh Dodds Science Publishing, Sawston, Cambridge, UK (ISBN-13:9781786763044; [www.bdspublishing.com](http://www.bdspublishing.com)).

**Peebles III, Edgar David** (copyrighted), ?, **2022** (Submitted for Publication-2/10/22;). Understanding the Effects of Humidity/Air Composition on Embryo and Post-Hatch Chick Development, Chapter 16, Pages ?-? in Part 2: Incubation, in Book: Embryo Development and Hatchery Practice in Poultry Production. First Edition. N. A. French, ed., Burleigh Dodds Science Publishing, Sawston, Cambridge, UK (ISBN-?; www.bdspublishing.com).

### Video Tapes

**Peebles, E. David, Sharon K. Whitmarsh, and Matthew R. Burnham, 2001.** Basic Concepts in *Drosophila melanogaster* Genetics. Produced by MSU Department of Agricultural Communications.

### Webinars

**Peebles, E. David, 2019.** Presenter and panelist for “Jumpstarting the Development of the Chick” live editorial webinar. Webinar was broadcast 8:30-10:00 AM on Tuesday, March 5, 2019 to approximately 200 listeners. The editorial webinar was an online Feed (FeedNavigator) production by William Reed Business Media, Le Belem-355 rue Vendemiaire, 34000 Montpellier, France. The webinar was sponsored by DuPont Industrial Biosciences.

**Peebles, E. David, 2021.** Presenter and panelist for live webinar titled “Best Practices in Hatchery Experience Sharing: *In ovo* Applications in Poultry-A Review”. Webinar was broadcast 9:05-9:50 AM (GMT+7) on Friday, September 24, 2021. The webinar was sponsored by Zoetis (Thailand) Limited, and was hosted by Pratiphat Klayduang, D.V.M. (Business Development Manager).

### Refereed Journal Articles

<sup>1</sup>Denotes invited article

1. **Peebles, E. D., J. D. Painter, and E. L. Bradley, 1984.** A possible role for the thyroid in reproductive inhibition in laboratory populations of the prairie deermouse (*Peromyscus maniculatus*). Comp. Biochem. Physiol. 77A:293-298.
2. **Brake, J., W. D. Berry, E. D. Peebles, J. F. Ort, and W. R. Campbell, 1985.** Effect of feeding CGA-72662 (Larvadex®) during growth on body weight, feed consumption, livability, production, and egg quality of SCWL layers. Poult. Sci. 64:247-252.
3. **Peebles, E. D., and J. Brake, 1985.** Relationship of dietary ascorbic acid to broiler breeder performance. Poult. Sci. 64:2041-2048.
4. **Brake, J., J. D. Garlich, and E. D. Peebles, 1985.** Effect of protein and energy intake by broiler breeders during the prebreeder transition period on subsequent reproductive performance. Poult. Sci. 64:2335-2340.
5. **Peebles, E. D., and J. Brake, 1985.** Relationship of eggshell porosity to stage of embryonic development in broiler breeders. Poult. Sci. 64:2388-2391.

6. **Peebles**, E. D., and J. Brake, **1986**. The role of the cuticle in water vapor conductance by the eggshell of broiler breeders. *Poult. Sci.* 65:1034-1039.
7. **Peebles**, E. D., and J. Brake, **1986**. The effect of induced molting on water vapor conductance and other eggshell quality parameters of broiler breeders. *Poult. Sci.* 65:1270-1274.
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9. **Peebles**, E. D., J. Brake, and R. P. Gildersleeve, **1987**. Effects of eggshell cuticle removal and incubation humidity on embryonic development and hatchability of broilers. *Poult. Sci.* 66:834-840.
10. **Peebles**, E. David, W. H. Burke, and H. L. Marks, **1988**. Effects of recombinant chicken growth hormone in randombred meat-type chickens. *Growth Dev. Aging* 52:133-138.
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12. **Peebles**, E. David, and H. L. Marks, **1991**. Effects of selection for growth and selection diet on eggshell quality and embryonic development in Japanese quail. *Poult. Sci.* 70:1474-1480.
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214. Mousstaaid, A., S. A. Fatemi, A. W. Levy, J. Purswell, H. A. Olanrewaju, B. Baughman, K. McNulty, P. D. Gerard, and E. D. **Peebles**, 2023. Effects of the *in ovo* administration of L-ascorbic acid on tissue L-ascorbic acid concentrations, systemic inflammation, and tracheal histomorphology of Ross 708 broilers subjected to elevated levels of atmospheric ammonia. *Animals* (Submitted for Publication).
215. Wang, X., T. J. Johnson, Y. Z. Farnell, A. S. Kiess, E. D. **Peebles**, X. Li, X. Zhang, L. Zhang, and W. Zhai, 2023. Effects of *Bacillus subtilis* and zinc feed additives on bacterial microbiome diversity and composition of male broilers subjected to a subclinical coccidia-challenge. *Animals* (In Preparation).

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218. Fatemi, S. A., K. E. C. Elliott, A. W. Levy, A. Mousstaid, S. Poudel, I. Poudel, and E. D. **Peebles**, 2023. Effects of the *in ovo* administration of the Marek's Disease vaccine alone or in combination with *in ovo* and dietary supplemental 25-hydroxyvitamin D<sub>3</sub> in Ross 708 broilers: II. Immunological and inflammatory responses, and small intestine histomorphology. *Animals* (In Preparation).
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220. Fatemi, S. A., and E. D. **Peebles**, 2023. *In ovo* administration of vitamin D<sub>3</sub> sources-a review. *Poult. Sci.* (In Preparation).
221. Fatemi, S. A., K. E. C. Elliott, A. Mousstaid, A. W. Levy, A. H. Alqhtani, and E. D. **Peebles**, 2023. The negative impact of a disproportionately high level of dietary 25-hydroxyvitamin D<sub>3</sub> on the performance and meat yield of Ross 708 broilers. *Animals* (In Preparation).
222. Fatemi, S. A., K. E. C. Elliott, K. S. Macklin, A. Mousstaid, L. Zhang, A. Bello, and E. D. **Peebles**, 2023. Improvement in the gene expression of coccidiosis-challenged Ross 708 broilers in response to the *in ovo* injection of 25-hydroxyvitamin D<sub>3</sub>. *Animals* (In Preparation).
223. Olojede, O. C., S. D. Filip To, C. D. McDaniel, and E. D. **Peebles**, 2023. Effect of eggshell color in determining broiler embryo temperature by infrared thermometry and subsequent effects of differential estimates of embryo temperature on eggshell conductance values. *Poult. Sci.* (In Preparation).
224. Olojede, O. C., S. D. F. To, C. D. McDaniel, and E. D. **Peebles**, 2023. Monitoring the air cell temperatures of broiler hatching eggs using transponders and probe networks. *Poult. Sci.* (In Preparation).
225. Jacob, R., E. D. **Peebles**, S. A. Hubbard, D. L. Magee, and F. D. Wilson, 2023. Gizzard erosion in chickens: A literature review. *J. Appl. Poult. Res.* (In Preparation).

226. **Peebles, E. D., M. R. Burnham, R. L. Walzem, S. L. Branton, and P. D. Gerard, 2021.** Effects of fasting on serum lipoprotein profiles in commercial egg laying hens inoculated with the F-strain of *Mycoplasma gallisepticum* at twelve weeks of age. *Poult. Sci.* (In Preparation).
227. Keirs, R. W., P. D. Gerard, and E. D. **Peebles, 2021.** Validity of fertilization assessment of broiler hatching eggs. *J. Appl. Poult. Res.* (In Preparation).
228. Keirs, R. W., E. D. **Peebles, L. W. Bennett, and P. D. Gerard, 2021.** Field assessment of broiler embryo and chick energy status through a practical liver tissue sampling technique. *J. Appl. Poult. Res.* (In Preparation).

### **Advisee Doctoral Dissertations**

1. Latour, M. A., **1995.** Maternal dietary fat transfer and utilization in the embryonic and neonatal broiler chicken. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.
2. Burnham, M. R., **2002.** Physiological factors potentially associated with the alteration of reproductive performance of commercial egg laying chickens infected with the F-strain of *Mycoplasma gallisepticum*. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.
3. Pulikanti, R., **2011.** Novel approaches in monitoring and determining the relationships between pre- and post-hatch metabolic parameters in progeny of young broiler breeders. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.
4. Jacob, R., **2013.** Effects of live and killed *Mycoplasma gallisepticum* vaccinations prior to an F-strain *M. gallisepticum* vaccine overlay on the performance, egg, blood, and visceral characteristics of commercial layer chickens. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.
5. Sokale, A. O., **2015.** Effects of the in ovo injection of Inovocox EM1 vaccine on the embryogenesis, posthatch performance, and gut pathology of Ross × Ross 708 broilers. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.
6. Collins, K. E., **2016.** *In ovo* vaccination of layer chickens with strain F *Mycoplasma gallisepticum*. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.
7. Fatemi, S. A., **2019.** Effects of the *in ovo* injection of vitamin D<sub>3</sub> sources on the hatchability, performance, breast meat yield, small intestine morphology, and immunity of Ross 708 broilers subjected to dietary insufficiency and pathogenic agents. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.
8. Alqhtani, A. H., **2020.** *In ovo* vaccination of layer chickens with 6/85 and ts-11 vaccine strains of *Mycoplasma gallisepticum*. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS 39762.

### Advisee Master's Theses

1. Miller, E. H., **1990**. Effects of dietary thiouracil on thyroid activity and reproduction in commercial layers. M. S. Thesis, Mississippi State, MS 39762.
2. Latour, M. A., **1992**. Effects of dietary fat on the metabolism and body composition of broiler chicks. M. S. Thesis, Mississippi State, MS 39762.
3. Cheaney, J. D., **1994**. Effects of fat in the starter diet on selected and non-selected meat-type chickens between 14 and 42 days of age. M. S. Thesis, Mississippi State, MS 39762.
4. Zumwalt, C. D., **1996**. Effects of added fats in broiler breeder diets on egg quality and pre- and post-hatch broiler development. M. S. Thesis, Mississippi State, MS 39762.
5. Pansky, T., **1996**. Effects of breeder age, dietary fat and cuticle removal on relative eggshell conductance, embryogenesis, hatchability and broiler growout performance. M.S. Thesis, Mississippi State, MS 39762.
6. Sulaiman, A., **1997**. The role of the yolk stalk in yolk absorption of post-hatch broiler chicks. M.S. Thesis, Mississippi State, MS 39762.
7. Gardner, C. W., **1997**. Effects of incubational environment and breeder age on lipid metabolism and embryogenesis in broiler hatching eggs. M.S. Thesis, Mississippi State, MS 39762.
8. Doyle, S. M., **1997**. Effects of saturated and unsaturated dietary fat sources on broiler breeder performance. M.S. Thesis, Mississippi State, MS 39762.
9. Burnham, M. R., **1999**. Effects of incubator humidity and breeder age on yolk and embryo compositions in broiler hatching eggs. M.S. Thesis, Mississippi State, MS 39762.
10. Jones, M. S., **2001**. Use of a Caprine serum fraction as an immunomodulator in Single Comb White Leghorn chickens. M.S. Thesis, Mississippi State, MS 39762.
11. Basenko, E. Y., **2003**. Effects of S6-strain *Mycoplasma gallisepticum* inoculation at either 10, 22, or 45 weeks of age on performance, egg, blood, and visceral characteristics of commercial egg laying hens. M.S. Thesis, Mississippi State, MS 39762.
12. Park, S. W., **2005**. The effects of F-strain *Mycoplasma gallisepticum* inoculation at twelve or twenty two weeks of age and diet supplementation on the performance and physiological characteristics of commercial layers. M.S. Thesis, Mississippi State, MS 39762.
13. Viscione, K. A., **2007**. Effects of 6/85-strain *Mycoplasma gallisepticum* inoculation alone at 10 weeks of age or in conjunction with FMG inoculation overlays at 22 or 45 weeks of age on the performance, egg, blood, and visceral characteristics of commercial egg laying hens. M.S. Thesis, Mississippi State, MS 39762.

14. Vance, A. M., **2007**. Effects of time specific F-strain *Mycoplasma gallisepticum* inoculation overlays on pre-lay ts-11-strain *Mycoplasma gallisepticum* inoculation on performance, egg, blood, and visceral characteristics of commercial egg laying hens. M.S. Thesis, Mississippi State, MS 39762.
15. McGruder, B. M., **2008**. Effects of individual and combinatorial electrolyte solutions comprised of various carbohydrates, salts, and stimulants injected into broiler hatching eggs on subsequent late term embryogenesis and posthatch performance through ten days of age. M.S. Thesis, Mississippi State, MS 39762.
16. Keralapurath, M. M., **2009**. Effects of *in ovo* injection of metabolic stimulants and L-carnitine in broiler hatching eggs on subsequent chick hatchability, grow out performance, and tissue nutrient profiles. M.S. Thesis, Mississippi State, MS 39762.
17. Sokale, A. O., **2011**. A proteomic approach to profiling the pipping muscle of the broiler embryo. M.S. Thesis, Mississippi State, MS 39762.
18. Bello, A., **2013**. Effects of the *in ovo* injection of 25-hydroxycholecalciferol on the subsequent hatchability, post-hatch performance, and bone characteristics of Ross × Ross 708 broilers. M.S. Thesis, Mississippi State, MS 39762.
19. Olojede, O. C., **2015**. Comparative evaluation of three different methodologies for determining embryo temperature in broiler hatching eggs during incubation. M.S. Thesis, Mississippi State, MS 39762.
20. Durojaye, O. A., **2017**. The development of a pragmatic methodology for the more accurate determination of the core body temperature of broiler embryos during incubation. M.S. Thesis, Mississippi State, MS 39762.
21. Mousstaaid, A., **2021**. Effects of the *in ovo* injection and dietary supplementation of L-ascorbic acid on the performance, tissue L-ascorbic acid concentrations, inflammatory response, and trachea histomorphology of Ross 708 broilers raised under normal and elevated atmospheric ammonia levels. M.S. Thesis, Mississippi State, MS 39762.
22. Lindsey, L. L., **2022**. Effects of the *in ovo* administration of the Poulvac *E. coli* vaccine in layer hatching eggs on hatchability, hatchling characteristics, and early posthatch chick performance. M.S. Thesis, Mississippi State, MS 39762.

### Abstracts and Proceedings (Scientific Presentations)

<sup>1</sup>Denotes invited presentation

<sup>2</sup>Denotes proceedings

1. **Peebles**, E. D., and J. Brake, **1983**. Relationship of dietary ascorbic acid supplementation to broiler breeder performance. *SPSS, Poult. Sci.* 62(Suppl. 1):1360.
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292. O'Donnell, K. L., X. Wang, K. G. S. Wamsley, A. S. Kiess. E. D. **Peebles**, and W. Zhai, **2017**. Effects of replacing antibiotics and anticoccidials with probiotics in broiler diets on processing yields. *Poult. Sci.* 96(E-Suppl. 1), Processing and Products:27(Abstr. #73).
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300. Fatemi, S. A., H. Zhang, K. E. C. Elliott, O. A. Durojaye, , and E. D. **Peebles**, **2018**. Effects of *in ovo* injection of L-ascorbic acid on early growth performance and systemic antioxidant capacity in broiler chickens. *SPSS, Poult. Sci.* 97(E-Suppl. 1), Metabolism and Nutrition-Feed Additives:49-50(Abstr. #166T).
301. **Peebles**, E. D. **2018**. Shell quality in broiler hatching eggs. Eleventh Annual International Congress Conference of Avian Specialists of Mexico (AVEM): 4 (Abstr. #4), March 6-8, 2018, Juriquilla, Quere'taro, Me'xico.
302. Fatemi, S. A., K. E. C. Elliott, W. Zhai, A. Bello, B. Turner, and E. D. **Peebles**, **2018**. Effects of the *in ovo* injection of vitamin D<sub>3</sub> and 25-hydroxyvitamin D<sub>3</sub> on meat yield and woody breast incidence in broilers fed commercial or calcium and phosphorus-restricted diets. *Poult. Sci.* 97(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals I:10-11(Abstr. #24).
303. Lindsey, L. L., K. E. C. Elliott, S. A. Fatemi, P.O. Ishola, P. D. Gerard, and E. D. **Peebles**, **2018**. Relationship between incubation and embryo temperature in broiler chickens. Mississippi State University Summer 2018 Undergraduate Research Symposium, Biological Sciences and Engineering Category, August 1, 2018: 34(Abstr. #BSE-24).

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305. Alqhtani, A. H., S. L. Branton, J. D. Evans, K. E. C. Elliott, and E. D. **Peebles, 2019**. The effects of *in ovo* administration of 6/85 *Mycoplasma gallisepticum* vaccine on layer chicken embryo hatchability and early post-hatch performance. SPSS, Poult. Sci. 98(E-Suppl. 1), Pathology:10(Abstr. #M29).
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309. Lindsey, L. L., K. E. C. Elliott, S. A. Fatemi, P. O. Ishola, P. D. Gerard, and E. D. **Peebles, 2019**. Reduced incubational temperature affects broiler body temperature and growth. J. Miss. Acad. Sci. 64(1):11(Abstr. #P5).
310. Alqhtani, A. H., S. L. Branton, J. D. Evans, K. E. C. Elliott, and E. D. **Peebles, 2019**. Successful *in ovo* administration as a possible alternative route of 6/85 *Mycoplasma gallisepticum* delivery on layer embryo survival and post-hatch performance. J. Miss. Acad. Sci. 64(1):13-14(Abstr. #P13).
311. Fatemi, S. A., K. E. C. Elliott, A. Alqhtani, A. Bello, and E. D. **Peebles, 2019**. Effects of the *in ovo* injection of vitamin D<sub>3</sub> and 25-hydroxyvitamin D<sub>3</sub> on the small intestine morphology and immunity of broilers challenged with coccidiosis. Poult. Sci. 98(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:33(Abstr. #13).
312. Lindsey, L. L., K. E. C. Elliott, S. A. Fatemi, P. O. Ishola, P. D. Gerard, and E. D. **Peebles, 2019**. Effect of reduced incubational temperature on broiler posthatch body temperature and growth. Poult. Sci. 98(E-Suppl. 1), Physiology and Reproduction:38(Abstr. #43).
313. Milby, A. C., X. Wang, D. Zhao, S. Gurung, G. S. Archer, E. D. **Peebles, and M. B. Farnell, 2019**. Behavioral analysis of alternative chick euthanasia strategies. Poult. Sci. 98(E-Suppl. 1), Animal Well-Being and Behavior:110(Abstr. #425P).

314. Fatemi, S. A., K. E. C. Elliott, A. Alqhtani, A. Bello, and E. D. **Peebles, 2019**. Effects of the *in ovo* injection of vitamin D<sub>3</sub> and 25-hydroxyvitamin D<sub>3</sub> on the performance and meat yield of broilers challenged with coccidiosis. *Poult. Sci.* 98(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:127(Abstr. #548P).
315. Alqhtani, A. H., S. L. Branton, J. D. Evans, K. E. C. Elliott, and E. D. **Peebles, 2019**. Transmission and impact of an *in ovo*-applied temperature-sensitive *Mycoplasma gallisepticum* live vaccine on layer embryos and post-hatch chicks. Proceedings of the 91<sup>st</sup> Annual Northeastern Conference on Avian Diseases (NECAD) of the American Association of Avian Pathologists (AAAP):38(Abstr. #3), September 11-13, 2019, State College, PA.
316. <sup>1</sup>**Peebles, E. D., 2019**. Factors of eggshell quality in broiler hatching eggs and their relationships to hatching success and posthatch performance. ChickMaster Incubator Co. industry training seminar for hatchery supervisors, Pigeon Forge, TN, 1:00-2:00 PM, October 2, 2019.
317. Fatemi, S. A., K. E. C. Elliott, A. Alqhtani, A. Bello, and E. D. **Peebles, 2019**. Improvement in the inflammatory reaction and small intestine morphology of Ross 708 broilers in response to the *in ovo* injection of various sources of vitamin D<sub>3</sub> when subjected to a coccidiosis challenge. Proc. 18<sup>th</sup> Annual MSU Graduate Student Association Research Symposium, Life and Biomedical Sciences and Engineering Division, October 05, 2019. First place graduate oral presentation award-MSU GSA graduate student (Fatemi) research paper competition.
318. Fatemi, S. A., K. E. C. Elliott, A. Alqhtani, A. Mousstaaid, A. Bello, A. Levy, and E. D. **Peebles, 2020**. Improvement in the performance and inflammatory responses of Ross 708 broilers when injected *in ovo* with various forms of vitamin D<sub>3</sub>. *SPSS, Poult. Sci.* 99(E-Suppl. 1), Metabolism and Nutrition V, Enzymes/Feed Additives:29(Abstr. #M91). Certificate of Achievement-graduate student (Fatemi) research paper competition, International Poultry Scientific Forum (41<sup>st</sup> Annual Meeting of the Southern Poultry Science Society), 2020.
319. Alqhtani, A., S. A. Fatemi, K. E. C. Elliott, A. Mousstaaid, A. Levy, A. Bello, and E. D. **Peebles, 2020**. Increased breast meat yield of Ross 708 broilers in response to the *in ovo* injection of various forms of vitamin D<sub>3</sub>. *SPSS, Poult. Sci.* 99(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:104(Abstr. #P340).
320. Miller, N. R., A. Mousstaaid, R. B. Oakes, S. A. Fatemi, A. Alqhtani, K. E. C. Elliott, W. W. Miller, and E. D. **Peebles, 2020**. The effects of supplementary *in ovo* and dietary ascorbic acid on broiler performance. Mississippi State University Spring 2020 Undergraduate Research Symposium, Biological and Sciences and Engineering Category, April 15, 2020: 91-92(Abstr. #BSE-084).
321. Elliott, K. E. C., E. B. Dehart, S. A. Fatemi, A. H. Alqhtani, A. Mousstaaid, K. S. Bannister, W. Zhai, and E. D. **Peebles, 2020**. Effects of reduced incubation temperature starting at 12 days of incubation on post-hatch broiler performance. *Poult. Sci.* 99(E-Suppl. 1), Management and Production:58(Abstr. #114).

322. Fatemi, S. A., K. E. C. Elliott, A. H. Alqhtani, A. Mousstaaid, L. Zhang, and E. D. **Peebles, 2020**. Effects of the *in ovo* injection of vitamin D<sub>3</sub> and 25-hydroxyvitamin D<sub>3</sub> on the vitamin D<sub>3</sub> activity-related gene expression of broilers challenged with coccidiosis. *Poult. Sci.* 99(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:115(Abstr. #235).
323. Fatemi, S. A., K. E. C. Elliott, A. H. Alqhtani, A. Mousstaaid, L. Zhang, and E. D. **Peebles, 2020**. Effects of the *in ovo* injection of vitamin D<sub>3</sub> and 25-hydroxyvitamin D<sub>3</sub> on the immune-related gene expression of broilers challenged with coccidiosis. *Poult. Sci.* 99(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:116(Abstr. #236).
324. Mousstaaid, A., K. E. C. Elliott, S. A. Fatemi, A. H. Alqhtani, and E. D. **Peebles, 2020**. Effects of the *in ovo* injection of L-ascorbic acid (AA) on the serum AA concentrations and hatchability of broiler embryos. *Poult. Sci.* 99(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:119(Abstr. #243).
325. Alqhtani, A. H., S. L. Branton, J. D. Evans, K. E. C. Elliott, and E. D. **Peebles, 2020**. Effects of the *in ovo* administration of the 6/85 *Mycoplasma gallisepticum* vaccine on layer chicken embryo livability and post-hatch performance. Proceedings of the 63<sup>rd</sup> American Association of Avian Pathologists (AAAP) annual meeting (virtual). July 30-August 6, 2020: Bacteriology/Antimicrobial, 9(Abstr. #11, #229).
326. Alqhtani, A. H., S. L. Branton, J. D. Evans, K. E. C. Elliott, and E. D. **Peebles, 2020**. Effects of the *in ovo* administration of the 6/85 *Mycoplasma gallisepticum* vaccine on the response of layer chickens to a virulent *M. gallisepticum* challenge at 4 weeks of age. Proceedings of the 92<sup>nd</sup> Annual Northeastern Conference on Avian Diseases (NECAD; virtual) of the American Association of Avian Pathologists (AAAP). September 15-16, 2020:41(Abstr. #8).
327. Fatemi, S. A., K. E. C. Elliott, A. H. Alqhtani, A. Levy, and E. D. **Peebles, 2021**. Negative impact of disproportionately high levels of dietary 25-hydroxyvitamin D<sub>3</sub> on the performance and meat yield of Ross 708 broilers. *SPSS, Poult. Sci.* 100(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:29-30(Abstr. #T24).
328. Miller, N. R., A. Mousstaaid, R. B. Oakes, S. A. Fatemi, A. H. Alqhtani, K. E. C. Elliott, W. W. Miller, P. D. Gerard, and E. D. **Peebles, 2021**. The effects of supplementary *in ovo* and dietary vitamin C on broiler performance through two weeks posthatch. *SPSS, Poult. Sci.* 100(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:55(Abstr. #P60).
329. Mousstaaid, A., W. W. Miller, K. E. C. Elliott, S. A. Fatemi, A. H. Alqhtani, and E. D. **Peebles, 2021**. Effects of the *in ovo* and dietary administration of L-ascorbic acid (L-AA) on the concentrations of L-AA in the eyes and nitric oxide in the serum of Ross 708 broilers. *SPSS, Poult. Sci.* 100(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:20(Abstr. #M59).
330. Milby, A. C., X. Wang, D. Zhao, S. Gurung, G. S. Archer, E. D. **Peebles, and M. B. Farnell, 2021**. Behavioral analysis of euthanasia strategies for neonatal male layer chicks. Texas A&M University Student Research Week, College Station, TX, March 29-April 1, 2021.

331. Forcier, N. M., S. A. Fatemi, C. J. Williams, K. E. C. Elliott, A. Mousstaid, and E. D. **Peebles**, 2021. Effects of *in ovo* injection of 25-hydroxyvitamin D<sub>3</sub> in conjunction with the Marek's Disease vaccine on the hatchability and hatch variables of Ross 708 broilers. Poultry Science 100(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:114(Abstr. #230).
332. Jia, L., C. Hsu, A. S. Kiess, E. D. **Peebles**, W. Zhai, and L. Zhang, 2021. Changes in gene expression in the intestinal mucus of broilers with woody breast myopathy. Poultry Science 100(E-Suppl. 1), Immunity, Health and Disease:41(Abstr. #81).
333. Jia, L., X. Zhang, X. Li, C. Hsu, M. W. Schilling, A. S. Kiess, E. D. **Peebles**, and L. Zhang, 2022. Effects of dietary bacitracin or *Bacillus subtilis* on the woody breast myopathy-associated gut microbiota of *Eimeria* spp. challenged and unchallenged broilers. Poultry Science 101(E-Suppl. 1), Physiology, Endocrinology and Reproduction: Broilers:3(Abstr. #M6).
334. Lindsey, L. L., J. D. Evans, K. E. C. Elliott, S. A. Fatemi, A. Mousstaid, P. D. Gerard, and E. D. **Peebles**, 2022. Effects of the *in ovo* injection of an *Escherichia coli* vaccine on the hatchability and characteristics of commercial layer chicks. Poultry Science 101(E-Suppl. 1), Physiology, Endocrinology and Reproduction: Laying Hens:5(Abstr. #M10).
335. Mousstaid, A., K. E. C. Elliott, S. A. Fatemi, A. H. Alqhtani, J. Purswell, W. W. Miller, H. A. Olanrewaju, and E. D. **Peebles**, 2022. Effects of the *in ovo* administration of L-ascorbic acid on the growth performance and incidence of eye lesions in broilers subjected to elevated levels of atmospheric ammonia. Poultry Science 101(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:47(Abstr. #T147).
336. Fatemi, S. A., K. E. C. Elliott, A. Levy, and E. D. **Peebles**, 2022. Effects of the *in ovo* administration of the Marek's Disease vaccine alone or in combination with the *in ovo* and supplemental dietary administration of 25-hydroxyvitamin D<sub>3</sub> on the performance and meat yield of Ross 708 broilers. Poultry Science 101(E-Suppl. 1), Metabolism and Nutrition, Vitamins and Minerals:48(Abstr. #T150).
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