

BIOGRAPHICAL SKETCH

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|---|--------------------|----------------|-------------------------|---------------------|
| NAME | CALDWELL, David J. | | POSITION TITLE | Assistant Professor |
| EDUCATION/TRAINING | | | | |
| INSTITUTION AND LOCATION | DEGREE | YEAR CONFERRED | FIELD OF STUDY | |
| Texas A&M University, College Station, TX | B.S. | 1991 | Poultry Science | |
| Texas A&M University, College Station, TX | M.S. | 1994 | Veterinary Microbiology | |
| Texas A&M University, College Station, TX | Ph.D. | 1997 | Veterinary Microbiology | |

Professional Experience

1997- Texas A&M University, College of Agriculture and Life Science, College of Veterinary Medicine, Departments of Poultry Science and Veterinary Pathobiology

Honors and Awards

Recipient of the Poultry Science Association Outstanding Graduate Student Research Presentation Award: Environment Section 1994

Recipient of the Poultry Science Association Outstanding Graduate Student Research Presentation Award: Immunology Section 1995

Publications in the last 5 years

- Caldwell, D.J., B.M. Hargis, D.E. Corrier, L. Vidal, and J.R. DeLoach, 1995. Evaluation of persistence and distribution of *Salmonella* serotype isolation from poultry farms using drag-swab sampling. *Avian Dis.* 39:617-621.
- Hargis, B.M., D.J. Caldwell, R.L. Brewer, D.E. Corrier, and J.R. DeLoach, 1995. Evaluation of the chicken crop as a source of *Salmonella* contamination for broiler carcasses. *Poultry Sci.* 74:1548-1552.
- Caldwell, D.J., B.M. Hargis, D.E. Corrier, and J.R. DeLoach, 1998. Frequency of isolation of *Salmonella* from protective foot covers worn in broiler houses as compared to drag-swab sampling. *Avian Dis.* 42:381-384.
- Caldwell, D.J., C.E. Dean, A.P. McElroy, J.G. Manning, D.Y. Caldwell, J.A. Byrd, and B.M. Hargis, 1999. Bursal anti-steroidogenic peptide (BASP): modulation of mitogen-stimulated bursal-lymphocyte DNA synthesis. *Comp. Biochem. Physiol.* 123:385-391.
- Caldwell, D.J., and B.M. Hargis, 1999. Effects of bursal anti-steroidogenic peptide (BASP) on mitogen-induced DNA synthesis in peripheral-blood lymphocytes (PBL) isolated from chickens, rats, and humans. *Dev. Comp. Immunol.* 22:613-620.
- Caldwell, D.J., J.G. Manning, A.P. McElroy, B.M. Hargis, and T.E. Porter, 1999. Effect of bursal anti-steroidogenic peptide (BASP) on chicken embryonic pituitary secretion of growth hormone (GH) and prolactin (PRL): evaluation in a reverse-hemolytic plaque assay (RHPA). *Dom. Animal Endocrinol.* 16:81-87.
- E.T. Barnhart, D.J. Caldwell, M.C. Crouch, J.A. Byrd, D.E. Corrier, and B.M. Hargis, 1998. Effect of lactose administration in drinking water prior to and during feed withdrawal on *Salmonella* recovery from broiler crops and ceca. *Poultry Sci.* 78:211-214.
- Caldwell, D.J., Y.A. Harari, B.M. Hargis, and G.A. Castro, 2000. Intestinal anaphylaxis in chickens: epithelial ion secretion as a determinant and potential functional component of functional immunity. *Dev. Comp. Immunol.* In press.
- McReynolds, J.L., D.Y. Caldwell, E.T. Barnhart, J.R. DeLoach, A.P. McElroy, R.W. Moore, B.M. Hargis, and D.J. Caldwell, 2000. The effect of *in ovo* or day-of-hatch subcutaneous antibiotic administration on competitive exclusion culture (PREEMPT™) establishment in neonatal chickens. *Poultry Sci.* 79:1524-1530.
- McReynolds, J.L., D.Y. Caldwell, E.T. Barnhart, J.R. DeLoach, A.P. McElroy, B.M. Hargis, and D.J. Caldwell, 2000. Antimicrobial residue detection in chicken yolk samples following administration to egg producing chickens and effects of residue detection on competitive exclusion culture (PREEMPT™) establishment. *J. Agric. Food Chem.* 48:6435-6438
- Farnell, M.B., M. El Halawani, S. You, A.P. McElroy, B.M. Hargis, and D.J. Caldwell, 2000. *In vivo* biologic effects of recombinant-turkey interferon-gamma (rtIFN γ) in neonatal Leghorn chicks: protection against *Salmonella enteritidis* organ invasion. *Avian Dis.* 45:473-478
- Farnell, M.B., R.W. Moore, A.P. McElroy, B.M. Hargis, and D.J. Caldwell, 2000. Effect of prolonged heat stress in single-comb-white-Leghorn (SCWL) hens on resistance to *Salmonella enteritidis* organ invasion in progeny. *Avian Dis.* 45:479-485
- Caldwell, D.Y., D.J. Caldwell, and B.M. Hargis, 2001. Effect of selected photo intensity regimes on chick preening behavior and competitive exclusion culture efficacy. *J. appl. Poult. Res.* 10:107-111.

- Caldwell, D.Y., R.W. Moore, D.J. Caldwell, and B.M. Hargis, 2001. Effect of photointensity, sound intensity, and ambient temperature on preening behavior and ingestion of spray-applied biologics. *J. Appl. Poult. Res.* 10:99-106.
- Caldwell, K.Y., S.D. Young, D.J. Caldwell, and B.M. Hargis, 2001. Interaction of Color and Photointensity on breening behavior and ingestion of sprayed-applied biologics. *J. Appl. Poult. Res.* 10:112-116.
- McElroy, A.P., L.L. Sarlin, D.Y. Caldwell, J.A. Byrd, D.J. Caldwell, J.A. Proudman, and D.M. Hargis, 2001. *In Vitro* Modulation of Chicken Ovarian Granulosa Cell DNA and Progesterone Synthesis by FSH and LH. *Biology of Reproduction*. Submitted
- McElroy, A.P., L.L. Sarlin, D.Y. Caldwell, D.J. Caldwell, J.A. Proudman, and B.M. Hargis, 2001. *In Vitro* Modulation of Chicken Ovarian Granulosa Cell DNA Synthesis by bursal Anti-Steroidogenic Peptide (BASP). *Endocrinology*. Submitted.
- Young, D.D., D.J. Caldwell, J.A. Byrd, D.Y. Caldwell, D.E. Corrier, L.H. Stanker, and B.M. Hargis, 2001. Evaluation of alternative sampling methods for *Samonella* critical control point determination at turkey processing. *J. Food Prodtection*. Submitted
- Young, S.D., J.A. Byrd, D.J. Caldwell, D.Y. Caldwell, R.L. Brewer, L.H. Stanker, and B.M. Hargis, 2001. Research note: Evaluation of Salmonella recovery incidence on commercially processed broiler carcasses retained or passed by regulatory inspectors for the presence of visible fecal or ingesta contamination. *J. Food Protection*. Submitted.
- Reinap II, R.A., A.P. McElroy, H.D. Danforth, and D.J. Caldwell, 2001. Chicken intestinal immunity: a novel *in vitro* response of the mucosal epithelium to *Eimeria maxima* antigen. *Avian Dis.* Submitted.
- Granburg, S.E., D.Y. Caldwell, L.R. Berghman, D.J. Caldwell, and B.M. Hargis, 2001. *In situ* detection and quantification of bursa of Fabricius cellular proliferation or apoptosis in normanl or steriod-treated neonatal chicks. *Poultry Sci.* Submitted.
- Granburg, S.E., D.Y. Caldwell, L.R. Berghman, I. Tizard, D.J. Caldwell, and B.M. Hargis, 2001. Observation and interpretation of occasional follicles with uniform high incidence of apoptotic cells in the neonatal chick bursa of Fabricius. *Poultry Sci.* Submitted.
- McReynolds, J.L., A.P. McElroy, B.M. Hargis, R.W. Moore, and K.J. Caldwell, 2001. Effect of individual or simultaneous administration of PREEMPT™ or Megan™ Vac 1 on *Salmonella typhimurium* cecal colonization in neonatal broiler chickens. *Avian Dis.* Submitted.

Grants in the last 5 years

- 1997 Contract for Assistance with Field Trials Evaluating Efficacy of CF3 for Exclusion of *Salmonella* from Commercial Broiler Flocks. M/S BioScience Division of Milk Specialties Company. \$10,000. No limit. Co-principal investigator: D.J. Caldwell.
- 1997 Efficacy of CF3 for the Exclusion of *Salmonella* from Commercial Broiler Flocks. M/S BioScience Division of Milk Specialties Company. \$38,000. No limit. Principal investigator: D.J. Caldwell.
- 1997 Evaluation of Environmental Effects on Chicken Ingestion of Spray-Box Applied Biologics. M/S BioScience Division of Milk Specialties Company. \$12,000. No limit. Co-principal investigator: D.J. Caldwell.
- 1997-2000 Measurement of Gut-Immunological/Physiological Response to Avian Coccidiosis. Specific Cooperative Agreement with USDA/ARS/LPSI Beltsville, MD. \$11,000. Principal Investigator: D.J. Caldwell.
- 1998 A Novel Approach to Identifying the Involvement of the Chicken Gut Epithelium in Immunity to Coccidia. TAMU Faculty Mini-Grant Program. \$1,317.00. Principal Investigator: D.J. Caldwell.
- 1998 Improvement of Immunity and Disease Resistance in Poultry to Enteric Pathogens (Project # 8594). CRIS Project. Principal Investigator: D.J. Caldwell.
- 1998-1999 Optimization of PREEMPT™ Bioefficacy. MS BioScience, Incorporated. \$44,000. Co-Principal Investigator: D.J. Caldwell.
- 1999 *Campylobacter* Survival in Raw Poultry Packaging Systems. U.S. Poultry and Egg Association. \$25,291. Co-investigator: D.J. Caldwell.
- 1999 A New Technique for Ante-Mortem Control of Pathogens in Broilers. USDA-SBIR/Lynntech Inc. \$13,475. Co-investigator: D.J. Caldwell
- 1999-2000 Evaluation of the Compatibility of Combined Administration of PREEMPT™ Administration and Coccivac-B™ to Neonatal Chicks. American Scientific Laboratories, Incorporated. \$3,300. Co-Principal Investigator: D.J. Caldwell.
- 1999-2001 Improved PREEMPT™ Delivery and Efficacy and Development of Therapeutic and Defined Competitive Exclusion Cultures (PREEMPT™-II). MS BioScience, Incorporated. \$301,400. Co-Principal Investigator: D.J. Caldwell.
- 1999-2001 Enhanced Immunity Through Specific Neonatal Clonal Lymphocyte Selection: A Novel Approach to Improving Disease Resistance in Chickens (and Other Vertebrate Animals?). College of Veterinary Medicine: Signature Programs Funding Program. \$60,000. Co-Principal Investigator: D.J. Caldwell.

- 2000 Poultry Plus™ Use in Poultry to Improve Live Performance and Meat Yield. eMerge Interactive, Inc. 2000. \$58,794. Co-Principal Investigator: D.J. Caldwell.
- 2000 Effect of Carcass Chilling on *Salmonella* and *Campylobacter* Recovery Incidence in Commercial Turkey Processing Plants. National Turkey Federation. \$9,821. Co-Principal Investigator: D.J. Caldwell.
- 2000 Predictive Value of Visible Contamination on Microbiological Contamination of Processed Carcasses in Turkey Processing Plants. National Turkey Federation. \$13,271. Co-Principal Investigator: D.J. Caldwell.
- 2000 Efficacy Testing of Competitive Exclusion Products for Protection Against *Salmonella* Challenge. DuPont Quality Grains, Inc. \$10,155.23. Co-Principal Investigator: D.J. Caldwell.
- 2000-2001 Improved PREEMPT™ Delivery and Efficacy. MS BioScience, Incorporated. \$88,000. Co-Principal Investigator: D.J. Caldwell.
- 2000-2002 Measurement of Gut-Immunological/Physiological Response to Avian Coccidiosis. Extension of Specific Cooperative Agreement with USDA/ARS/LPSI Beltsville, MD. \$20,000. Principal Investigator: D.J. Caldwell.
- 2000-2002 *Salmonella galinarum* vaccine development: Generation of Transposon and Reciprocal Cross Mutants for Safe and Effective Vaccination. Pacific Vet Group. \$30,000. Co-Principal Investigator: D.J. Caldwell.
- 2000-2002 Role of Crop for *Salmonella* Contamination of Broiler Carcasses Through Slaughter. Specific Cooperative Agreement with USDA/ARS/SPARC College Station, TX. \$60,000. Principal Investigator: D.J. Caldwell.
- 2001-2003 Recovery Incidence of *Salmonella* and *Campylobacter* Gastrointestinal Colonization in Broilers and Turkeys. Extension of Specific Cooperative Agreement with USDA/ARS/SPARC College Station, TX. \$20,000. 2001-2003. Principal Investigator: D.J. Caldwell.
- 2001-2003 Measurement of Gut-Immunological/Physiological Response to Avian Coccidiosis. Extension of Specific Cooperative Agreement with USDA/ARS/LPSI Beltsville, MD. \$14,000. 2002. Principal Investigator: D.J. Caldwell.
- 2001-2003 Effect of carcass chilling on *Salmonella* or *Campylobacter* recovery incidence in commercial turkey processing plants – Phase II: Impact of chiller management. National Turkey Federation. 2002. \$40,066.00. Principal Investigator: D.J. Caldwell.