

## **Anthony W. Confer, Ph.D.**

Regents Professor & Sitlington Endowed Chair

Department of Veterinary Pathology

Center for Veterinary Health Sciences

Oklahoma State University-Stillwater

### **Contact Information:**

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### **Education:**

1972: D.V.M., Veterinary Medicine, Oklahoma State University

1974: M.S., Veterinary Pathology, The Ohio State University

1978: Ph.D., Microbiology, University of Missouri – Columbia

Board Certification

Diplomate: American College of Veterinary Pathologists

### **Academic Appointments:**

2003 – present: Regents Professor, Oklahoma State University

1995-present: Sitlington Chair in Food Animal Research, College of Veterinary Medicine, Oklahoma State University

1985-present: Professor, Veterinary Pathology, Oklahoma State University

2004-2008: Head, Veterinary Pathobiology, Oklahoma State University

1999-2001: Associate Dean for Research and Graduate Education, CVM, Oklahoma State University

1996-1999: Head, Anatomy, Pathology, and Pharmacology, Oklahoma State University

1986-1996: Head, Veterinary Pathology, Oklahoma State University

1990-1991: Visiting Professor, Department of Microbiology, University of British Columbia

1981-1985: Associate Professor, Veterinary Pathology, Department of Veterinary Pathology, OSU

1978-1981: Associate Professor, Veterinary Pathology, Department of Veterinary Pathology, Louisiana State University

1976-1978: Postdoctoral Fellow, sponsored by National Cancer Institute, Department of Veterinary Microbiology, University of Missouri-Columbia

1974-1976: Captain, US Air Force, Veterinary Corps; Staff Pathologist; Armed Forces Institute of Pathology, Department of Veterinary Pathology, Washington DC

1972-1974: Pathology Resident, Ohio State University, Department of Veterinary Pathobiology

**Awards and Honors:**

1985, 2011: Pfizer Award for Research Excellence

1987, 2002: Norden Distinguished Teaching Award

1992: AVMA, AFIA Veterinary Medical Research Award

1993: Sigma Xi Chapter Lecturer

1993: Outstanding Instructor - Second Year Class

2003: Oklahoma State University Eminent Faculty Award

2003: Oklahoma State University, Leadership Legacy – October

2005: National Phi Zeta Distinguished Service Award

2006: Oklahoma Journal Record "On the Brink" Award for Research Innovation

2008: Regents Distinguished Teaching Award, CVHS

2009: OSU College of Vet Med Distinguished Alumnus

2015: Oklahoma Higher Education Hall of Fame

2016: OSU "Leave the Ladder Down" mentoring award

## **Research Funding:**

### **Current:**

PI: Bovine Respiratory Disease Project - Funded by Oklahoma Agricultural Experiment Station and USDA Formula Funds, Project OKL0340 ~\$15,000 per year.

Co-PI: Mannheimia haemolytica IgA protease as a component of an intranasal vaccine. Technology and Business Development Program, \$24,627.

Co-I: Evaluation of Bloplex™ organic trace minerals on clinical signs, immune response variables, and mineral balance in calves following natural exposure to bovine viral diarrhea virus type 1 and subsequent Mannheimia haemolytica infection. Alltech. \$90,679.

### **Past:**

2013-2014 - Development of a Mannheimia haemolytica model for studying RecA inhibitors. Noble Foundation, Ardmore, OK - \$88,384

2015 – 2016: Zuprevo® 18% Competitive Histophilus somni Challenge Study 2. Merck Animal Health, \$163,442

2009 – 2013: USDA-CSREES, AFRI Competitive Grant, "Mannheimia haemolytica chimeric protein vaccine for delivery of multiple outer membrane protein and leukotoxin antigens.", Role: PI, \$375,000

### **Selected Publications:**

Last 2 years (Total Refereed Scientific Journal Articles – 223; Book Chapters – 14; Published abstracts – 131; Medical education articles – 4; Continuing education publications - 20

1. Fulton RW, Herd HR, Sorenson NJ, Confer AW, Ritchey JW, Ridpath JF, Burge LJ. Enteric disease in postweaned beef calves associated with Bovine coronavirus clade 2. J Vet Diag Invest 27: 97-101, 2015
2. Holbrook T, Gilliam L, Stein F, Morgan S, Avery A, Confer AW, Panciera RJ. Lathyrus hirsutus (Caley Pea) Intoxication in a Herd of Horses. J Vet Intern Med 29 :294-298, 2015.
3. Taylor JD, Holland B, Step DL, Payton ME, Confer AW. Nasal isolation of Mannheimia haemolytica and Pasteurella multocida as predictors of respiratory disease in shipped calves. Res Vet Sci 99: 41-45, 2015
4. Moriel P, Artioli LF, Poore MH, Confer AW, Marques RS, Cooke RF. Increasing the metabolizable protein supply enhanced growth performance and led to variable results on innate and humoral immune response of preconditioning beef steers. J Anim Sci. 93::4473-85, 2015.
5. Confer AW, Snider TA, Taylor JD, Montelongo M, Sorensen NJ. Pulmonary lesions and clinical disease in calves challenged with Histophilus somni five days after tildipirosin or tulathromycin treatment. Amer J Vet Res 77:358-366, 2016
6. Fulton RW, d'Offay JM, Landis C, Miles DG, Smith RA, Saliki JT, Ridpath JF, Confer AW, Neill JD, Eberle R, Clement TJ, Chase CCL, Burge LJ, Payton ME. Detection and characterization of viruses as field and vaccine strains in feedlot cattle with bovine respiratory disease. Vaccine 34:3478-3492, 2016

7. Carlos-Valdez L, Burciaga-Robles LO, Step DL, Krehbiel CR, Holland BP, Richards CJ, Montelongo M, Confer AW, Fulton RW. Effect of timing of *Mannheimia haemolytica* challenge following short-term natural exposure to bovine viral diarrhoea virus type 1b on animal performance and immune response in beef steers. *J Anim Sci* 94: 4799-4808, 2016
8. Ayalew S, Confer AW, Hartson SD, Canaan PJ, Payton M, Couger B. Proteomic and bioinformatic analyses of putative *Mannheimia haemolytica* secretome by liquid chromatography & tandem mass spectrometry. *Vet Microbiol* 203: 73-80, 2017
9. Ayalew S., Confer AW, Hansen RD, Couger MB. Genome sequence of *Mannheimia haemolytica* serotype 1 isolate 16041065 BH. *Genome Announc* 2017 Apr 6;5(14). pii: e01721-16. doi: 10.1128/genomeA.01721-16.
10. Ayalew S, Confer AW, Hansen RD, Couger MB. Genome sequence for a spontaneous non-hemolytic mutant of *Mannheimia haemolytica* 16041065 GH. *Genome Announc* 2017 Apr 6;5(14). pii: e01720-16. doi: 10.1128/genomeA.01720-16.
11. Rothenburg LS, Snider TA, Wilson A, Confer AW, Ramachandran A, Manic R, Rizzi T, Nafe L. Disseminated Phaeohyphomycosis in a dog. *Med Mycol Case Rep*15:28-32, 2017.
12. Fulton RW, Confer AW, Sorensen NJ, Ridpath JF, Burge LJ. Bovine viral diarrhoea virus 1b fetal infection with extensive hemorrhages. *J Vet Diagn Invest*, in press

**Patents:**

Principal Inventor - *Mannheimia haemolytica* Outer Membrane Protein as a Vaccine or Vaccine Component for Shipping Fever. U.S. Provisional Patent Application No. 60/422,305. OSU Ref. 2002.08; U.S. Utility Patent Application No. 11/235,982, U.S. Patent No. 7,144,580, granted December 6, 2006.

Co-Inventor (S. Ayalew, Principal Inventor) – *Mannheimia haemolytica* Chimeric outer membrane protein PlpE and Leukotoxin Epitopes as a Vaccine or Vaccine Component Against Shipping Fever. Provisional Application Serial No. 60/757,342 filed 1/9/06; U.S. Patent No. 7,794,734 B2, granted September 14, 2010.