

TAMMY RENEE BECKHAM, DVM, PhD

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Daytime: 979-845-2855 | tbeckham@tvmdl.tamu.edu**EDUCATION**

PhD, Biomedical Science, Auburn University/United States Army Medical Research Institute of Infectious Diseases (USAMRIID), Auburn, AL, May 2001

- Dissertation: Early Recognition of Filoviral Infections: Evaluation and Development of Diagnostic Assays

DVM, Auburn University College of Veterinary Medicine, Auburn University, Auburn, AL, 1998

- Magna Cum Laude Graduate

MM, College Conservatory of Music, University of Cincinnati, Cincinnati, Ohio, 1989**BM**, College Conservatory of Music, University of Cincinnati, Cincinnati, Ohio, 1986**PROFESSIONAL EXPERIENCE**

Director, Department of Homeland Security's Center of Excellence for Foreign Animal and Zoonotic Diseases (FAZD Center), College Station, Texas (September 2010-present)

Responsibilities: Provide leadership to the FAZD Center in its pursuit to conduct research, education and outreach on issues associated with high consequence foreign, emerging and/or zoonotic animal diseases threats. The Center's thematic areas include: biological systems, information technology systems, epidemiologic & economic modeling, along with education and outreach. Represent the Center at scientific meetings. Serve on the Agricultural Sector Coordinating Council, interface with the Department of Homeland Security (DHS) Science and Technology Office, the US Department of Agriculture (USDA), Plum Island Animal Disease Center (PIADC), and other customers/stakeholders. Provide management of DHS cooperative agreements and projects. Identify additional research and funding opportunities, build partnerships with agricultural industries and manage the Center's research initiatives and projects.

Accomplishments: Successfully procured over 11M dollars in research funding for the Center since 2010. Provided oversight to the development of a nationally aligned and highly integrated research portfolio focused on innovative solutions and product delivery. Provided oversight to novel vaccine platform development; development, validation and production of diagnostic assays/agricultural screening tools for high priority & emerging diseases; successfully developed and transitioned biosurveillance common operating picture to the National Biosurveillance Integration Center; leveraged information dashboard framework for a variety of applications (emergency response, surveillance, business continuity planning, and laboratory capacity model) that support agricultural resiliency within the US. Developed collaborative partnerships with key national and international organizations to include: agricultural industries, federal and state partners, other universities, biopharma and the CDC. Assembled and organized a multi-disciplinary team of expertise to act as reach-back capability for federal partners. Provided strategic vision and leadership to the Center. Developed and implemented a six year strategic plan.

Interim Director, Department of Homeland Security's Center of Excellence for Foreign Animal and Zoonotic Diseases (FAZD Center), College Station, Texas (March 2010-September 2010)**Director, Texas Veterinary Medical Diagnostic Laboratory, The Texas A&M University System**, College Station, Texas (May 2008-present)

Responsibilities: Provide visionary leadership to all locations of the Texas Veterinary Medical Diagnostic Laboratory (TVMDL) in its pursuit to serve the animal industries of Texas by addressing animal and

public health issues, diagnosing animal diseases, and helping to prevent catastrophic foreign animal or zoonotic disease through early detection. Serve as the Chief Executive Officer for 4-location laboratory system of 155-employees. Work closely with The Texas A&M University System, legislative liaisons and directly with elected officials to ensure effective communication of agency priorities and needs and ensures timely and accurate response to requests for information from legislators. Formulate and implement long and short term goals/objectives for TVMDL. Direct the preparation of annual and legislative budgets and make presentations to Texas A&M System, state, and federal officials. Work to ensure current and future streams of revenue and funding for TVMDL. Ensure that all agency programs and operations are in compliance with applicable federal and state statutes and the Texas A&M System policies/procedures. Provide leadership in establishing and maintaining an organizational culture and work environment supportive of affirmative action, diversity, and equal employment opportunity goals. Assure that all members of the organization have a clear understanding of the TVMDL vision, mission, scope, objectives, and core values. Supervise the fiscal, general business, and human resource functions of the agency to assure the efficient and effective management of agency financial and human resources as well as compliance with all applicable System federal, and state regulations and procedures.

Accomplishments: Provided strategic vision and leadership to the Agency. Developed and implemented a five year strategic plan. Formed a TVMDL advisory committee consisting of agricultural commodity leaders, members of the Texas A&M System, the Texas Animal Health Commission and the Texas Department of Health and Human Services. Enhanced collaborations across Texas A&M System, established joint appointments and programs with the Texas A&M College of Veterinary Medicine and AgriLife agencies to include a joint pathology residency program and joint veterinary extension appointments. Oversaw the design and construction of a BSL2 poultry laboratory in Gonzales, Texas and a BSL3 laboratory in Amarillo, Texas. Enhanced and implemented new biosafety and quality standards for the laboratory; successfully led the lab through a quality system audit (recently re-accredited by AAVLD through 2016); created and implemented new diagnostic development and validation capacity at TVMDL. Successfully evaluated and altered Agency fee structure to stabilize Agency finances in the face of State general revenue cuts. Act as subject matter expert to industry, stakeholders and legislative bodies (State and Federal) on matters pertaining to State and National Animal Health issues.

Director, Foreign Animal Disease Diagnostic Laboratory, United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Plum Island Animal Disease Center (PIADC), Orient Point, New York (July 2007-May 2008)

Responsibilities: Management responsibility for diagnosing animal diseases, supporting and developing a nation-wide animal health diagnostic system, and providing services as a national and international veterinary reference laboratory for animal diseases. Managing employees, budget, procurement, laboratory equipment, information technology, and other property in carrying out the laboratory's mission. Developing budget, workforce, and technology plans; collaborates with other National Veterinary Services Laboratories (NVSL), Veterinary Services (VS), and Agency staff, where appropriate, on resource planning and utilization. Responsible for ensuring equal opportunity and non-discrimination in internal personnel management practices and in the delivery of program services. Responsible for ensuring the safety and security of employees and overseeing the management of class 2 zoonotic agents and select agents in lab. Responsible for providing NVSL customers timely and accurate response and assistance. Responsible for ensuring the implementation and ongoing support of the NVSL Quality Assurance program.

Duties: Develop and implement laboratory operational and project plans for new or non-routine activities and consistently meets milestones. Set and meets performance goals and targets for the laboratory. Assist in the expansion and improvement of a nation-wide animal health diagnostic system by ensuring proficiency tests are completed within established time frames. Coordinate requests from other laboratories within established time-frames for diagnostics, reference reagents, and other services for diseases where the lab is recognized as a World Organization for Animal Health (OIE) reference lab and for diseases endemic to the U.S. Perform all duties in a manner which consistently demonstrates fairness, cooperation, and

respect toward coworkers, office visitors, and all others in the performance of official business, including program delivery. Develop strategies to resolve and settle employment discrimination complaints (informal and formal) and identifies and addresses patterns or trends to prevent recurrences. Maintain biological security within the laboratory so as to prevent any reasonable possibility of allowing select agents to escape. Ensure that all APHIS/NVSL policies related to safety, biosafety, radiological substances, and occupational health are followed. Ensure that all USDA/APHIS and NVSL policies and procedures relating to security of agents, personnel, facilities, information, and animals are followed. Demonstrate to employees, through leadership and involvement, the Agency's commitment to achieve high quality results through an active customer service program. Set explicit customer service goals, develops action plans, and provides adequate resources to achieve these goals. Integrate activities with other Agency units, other federal agencies, state and local agencies, industry organizations, and special interest groups to form partnerships to improve the delivery of services. Demonstrate a positive commitment to laboratory quality assurance (QA) activities through promotion and advancement of the laboratories' QA strategic goals. Effectively prioritizes QA needs, laboratory activities, and project and individual workload to meet QA goals. Ensure effective laboratory participation in QA-related activities (equipment monitoring, test method validation, participation in QA Liaison activities and audits, campus-wide QA tasks, training, etc.)

Accomplishments: Successfully managed and provided oversight to the operational and project plans for the Foreign Animal Disease Diagnostic Laboratory (FADDL). Managed a \$4M dollar FADDL program budget and fully staffed the FADDL. Coordinated with National Animal Health Laboratory Network (NAHLN) coordinator to ensure FADDL support for the NAHLN, including reference materials, proficiency testing and training. Worked to integrate FADDL activities with ongoing diagnostic research and development within the Department of Homeland Security and the USDA Agricultural Research Service. Coordinated and prioritized QA needs and QA-related activities within FADDL. Participated in internal QA audits. Coordinated international reference laboratory activities including diagnostic testing of samples from the Food and Agricultural Organization (FAO). Coordinated closely with DHS National Bioforensics Analysis Center (NBFAC) director to execute the agricultural bioforensics program. Coordination of this program included establishing policies and procedures for receipt and handling of high consequence agricultural forensics specimens into the FADDL. Acted as a subject matter expert to DHS and international organizations such as the Foreign Agriculture Service, on the development and validation of new diagnostic technologies. Provided updates and briefings to National Program Coordinators and the House Government Reform Committee and legislative affairs personnel for the House Energy and Commerce Committee. Member of the Plum Island Senior Leadership Group, NAHLN Steering Committee and National Veterinary Stockpile Committee. Assisted with and facilitated the development of a technology transition agreement for assay development and validation between APHIS-FADDL, NAHLN and the DHS.

Supervisory Veterinary Medical Officer, USDA APHIS PIADC, Orient Point, New York (August 2006-July 2007)

Responsibilities: Coordinate all aspects of the Foreign Animal Disease Diagnostic Laboratory's role as a reference laboratory for the National Animal Health Laboratory Network (NAHLN). Support the NAHLN as an expert on diagnostic testing and validation of assays used to detect exotic animal diseases. Scientific Lead for the development and validation of emerging technologies to detect endemic and exotic livestock diseases. Coordinate and execute the Department of Homeland Security's (DHS) agricultural bioforensic program at PIADC. Act as a liaison between APHIS and DHS. Coordinate collaborations and facilitate interactions with the DHS National Bioforensics Analysis Center (NBFAC), DHS Agricultural Assay Development and Agricultural Domestic Demonstration and Application Projects and the University Center of Excellence for Foreign Animal and Zoonotic Disease Defense. Communicate and coordinate with foreign scientists and world reference laboratories on reagent generation/collection, diagnostic test development, validation and implementation. Act as U.S. subject matter expert on foreign animal disease (FAD) diagnostic test development and validation.

Duties: Plan, formulate, develop, and coordinate all aspects of FADDL's role as a reference laboratory for the NAHLN. Coordinate and guide APHIS Proficiency and Validation Services Section (PVSS) scientific staff in development and validation projects, training and proficiency testing and other activities: conceive, plan, coordinate and establish priorities, milestones, staffing, funding, infrastructure planning and coordinate with customers (NVSL reference laboratories and NAHLN). Provide management oversight and integration with DHS components of projects and program activities. Research, evaluate and promote new and emerging technologies, and develop standards, criteria, and performance measures for products, technologies and systems. Coordinate, manage and execute the DHS NBFAC spoke agricultural bioforensics activity at PIADC. Act as a subject matter expert on testing and diagnostics for the APHIS programs on the Conceptual Design Team for the National Bio and Agro Defense Facility (eventually the replacement for the Plum Island facility).

Accomplishments: Successfully managed and provided scientific oversight to the Proficiency and Validation Services Section (PVSS) of FADDL. Established and accomplished program goals and milestones within a defined staffing and financial and plan. Managed a \$2.5M validation budget and fully staffed the PVSS section within 6 months of being hired as the PVSS Section Head. Within the first 9 months in this position, provided oversight to the successful validation and review of four new assays and/or technologies that will be deployed to the NAHLN in 2007. These new technologies and/or assays included a rapid rRT-PCR assay for detection of FMD virus; a newly developed sensitive and specific assay for Classical Swine Fever; and high throughput technologies that will prepare the nation for surge capacity testing in the event of a foreign animal disease outbreak. Coordinated the 2006 FMD and CSF proficiency testing of NAHLN member laboratories which resulted in 154 laboratory personnel in 37 NAHLN laboratories being certified to perform these assays. Prepared and established an interagency agreement between the USDA APHIS and NBFAC for execution of the NBFAC agricultural bioforensics program within APHIS. Identified staffing and budget requirements for execution of the bioforensics program within APHIS. Coordinated closely with DHS NBFAC director to execute the agricultural bioforensics program. Provided monthly financial and progress reports to the DHS NBFAC program. Coordinated national research efforts (within APHIS and with the DHS) for the identification and development of emerging technologies for the detection of exotic livestock diseases. Acted as a subject matter expert to DHS on the development and validation of new diagnostic technologies. Provided updates and briefings to National Program Coordinators to include a briefing on the Updated Joint USDA/DHS 2006 Diagnostic Roadmap. Conceived, planned, and currently leading scientific studies for the diagnostic validation of African Swine Fever, Rinderpest and other high consequence foreign animal disease rRT-PCR assays. Prepared and established a statement of work (SOW) that outlines collaboration with NVSL FADDL, the NAHLN and DHS for validation of a semi-automated high throughput robotic system. Worked as part of a NVSL team to choose high throughput robotics equipment that was placed in NAHLN. Established the NAHLN Technical Methods subcommittee on robotics. Worked as a part of the NAHLN Technical Methods Working Group subcommittee on equivalency to establish guidelines for diagnostic assay equivalency studies. Coordinated international collaborations to obtain reagents and samples for the validation of real-time PCR assays for Foot and Mouth Disease Virus, African Swine Fever, Rinderpest and Foot and Mouth Disease Virus. Prepared standard operating procedures for proficiency panel testing, quality control procedures, reference panel production and assay performance.

Microbiologist & Deputy Director for Science, Department of Homeland Security (DHS), Science and Technology (S&T), PIADC, Orient Point, New York (March 2006-August 2006)

Responsibilities: Participate with the Center Director and Deputy Director for Operations, in the planning, coordinating, managing, and evaluating the overall scientific activities of PIADC. Provide leadership to DHS scientific staff, oversee the implementation of DHS scientific programs, and make commitments in the allocation, control and efficient use of resources in DHS scientific programs at PIADC. Plan, lead, coordinate and guide DHS scientific staff in research and development projects and activities.

Duties: Conceive, plan, lead, coordinate, direct and evaluate scientific research and development projects utilizing the latest technologies, systems and methods to develop preventive and therapeutic measures and

diagnostic tools to counter foreign animal diseases and high-consequence zoonotic threat agents. Plan, lead, coordinate and guide DHS scientific staff in research and development projects and activities: conception, planning, coordination, determination of content, priorities, timeframes, changes, staffing, funding, infrastructure planning, procurement of selected services and needed equipment, and coordination of efforts with customers and with other research organizations having parallel programs, shared interests or needed expertise. Provide management oversight and integration with USDA components of projects and program activities. Research, evaluate and promote new and emerging technologies, and develop standards, criteria, and performance measures for products, technologies and systems. Act as Thrust Area Coordinator, Agriculture Security Thrust Area, Biocountermeasures Portfolio, Office of Research and Development, Science and Technology Directorate, DHS. Coordinate collaborations with DHS University Center of Excellence for Foreign Animal and other high consequence diseases.

Accomplishments: Prepared 2006 DHS Agricultural Security Program Execution Plan. Provided scientific oversight to the DHS Targeted Advanced Development and Disease Threat Assessment/ Forensics Unit at Plum Island. Coordinated and supported the DHS funded Agricultural Assay Development and Agricultural Domestic Demonstration and Application Programs.

Microbiologist & Chief of the Disease Threat and Assessment/Forensics (DT&F) Unit, DHS S&T, PIADC, Orient Point, New York (June 2005-March 2006)

Responsibilities: Coordinate all activities of the PIADC Agricultural Bioforensics Laboratory with the National Bioforensics Analysis Center (NBFAC) at Fort Detrick, MD. Establish a Disease Threat and Assessment capability at PIADC to include laboratory, epidemiological and bioinformatics components. Provide support for the Biodefense Knowledge Center, Biological Threat Characterization Center and intelligence agencies on agricultural threats. Coordinate program responsible for development and validation of emerging technologies to identify and detect endemic and exotic livestock diseases. Thrust Area Coordinator, Agriculture Security Thrust Area, Biocountermeasures Portfolio, Office of Research and Development, Science and Technology Directorate, DHS. Coordinate DHS funded Agricultural Domestic Demonstration and Application Programs. Coordinate collaborations with DHS University Center of Excellence for Foreign Animal and other high consequence diseases.

Duties: Oversight of the development, production, and evaluation of sophisticated, emerging assay systems for use in bioforensic analysis and in the diagnosis of foreign animal diseases. Plan, formulate, develop, and coordinate all aspects of the agricultural bioforensic laboratory with the NBFAC. This includes scientific oversight of the validation of assays, development of a quality assurance program directed towards ISO17025 accreditation, developing and organizing training and proficiency testing programs, and conducting studies designed to develop, evaluate and/or improve existing diagnostic assays and methods, with special attention to the assays used to diagnose foreign animal diseases. Provide oversight and management to DHS Agriculture Domestic Demonstration and Application Programs. Coordinate collaborations with DHS University Center of Excellence for Foreign Animal and other high consequence diseases.

Accomplishments: Supported the establishment of a bioforensic laboratory capability at PIADC by coordinating with NBFAC personnel. Managed a \$600K forensics and \$3M Disease Threat and Assessment Unit budget. Identified staffing needs and challenges within the DTA&F unit and used creative methods such as the Oakridge Institute for Science and Education (ORISE) program and establishment of SOWs with other federal agencies to harvest expertise to fill critical functions/needs of the DTA&F Unit. Coordinated national research efforts for the identification, development and validation of emerging technologies for the identification and detection of exotic livestock diseases. Provided updates and briefings to National Program Coordinators. Validated virus isolation, antigen capture ELISA and rRT-PCR assays for use in the newly established bioforensic laboratory at PIADC. Adapted current diagnostic protocols for use in the newly established bioforensics laboratory. Coordinated national research efforts for the identification, development and validation of emerging technologies for the identification and detection of exotic livestock diseases. Provided updates and briefings to National

Program Coordinators. Coordinated international collaborations to obtain reagents and samples for the enhancement of the PIADC reference collection and validation of real-time PCR and other diagnostic assays for Classical Swine Fever and Foot and Mouth Disease Virus. Prepared standard operating procedures for proficiency panel development and testing. Prepared standard operating procedures for newly developed diagnostic procedures.

Veterinary Medical Officer, APHIS USDA PIADC, Orient Point, New York (October 2002-June 2005)

Responsibilities: Scientific Lead for the development and validation of emerging technologies to detect endemic and exotic livestock diseases. Coordinate all aspects of the Foreign Animal Disease Diagnostic laboratory's role as a reference laboratory for the National Animal Health Laboratory Network. Support the National Animal Health Laboratory Network (NAHLN) as an expert on diagnostic testing and validation of assays used to detect exotic animal diseases. Coordinate and support the establishment of a DHS bioforensic agricultural capability at PIADC.

Duties: Oversight of the development, production, and evaluation of sophisticated, emerging assay systems for use in the diagnosis of foreign animal diseases. Plan, formulate, develop, and coordinate all aspects of FADDL's role as a reference laboratory for the NAHLN. This includes scientific oversight of the validation of assays, developing and organizing training and proficiency testing programs, and conducting studies designed to develop, evaluate and/or improve existing diagnostic assays and methods, with special attention to the assays used to diagnose exotic livestock diseases. Acting as liaison between APHIS and DHS National Bioforensic Analysis Center, to include establishing and maintaining forensic capabilities for high consequence agricultural pathogens at the PIADC, providing oversight of forensic testing for agricultural agents, and serving as an APHIS exotic livestock disease expert working closely with DHS program director for forensic testing.

Accomplishments: Conceived, planned, and led scientific studies for the diagnostic validation of Classical Swine Fever and Foot-and-Mouth Disease rRT-PCR assays. Supported the establishment of a bioforensic laboratory capability at PIADC by coordinating with NBFAC personnel. Validated virus isolation and rRT-PCR assays for use in the newly established bioforensic laboratory at PIADC. Adapted current diagnostic protocols for use in the newly established bioforensics laboratory. Implemented a training and proficiency testing program for members of the NAHLN. Increased national preparedness for response to a foreign animal disease outbreak and strengthened the National Animal Health Surveillance Program capability by training and proficiency testing members from twenty-nine NAHLN laboratories on the performance of the Classical Swine Fever and Foot-and-Mouth Disease rRT-PCR assays. Coordinated national research efforts for the identification and development of emerging technologies for the detection of exotic livestock diseases. Provided updates and briefings to National Program Coordinators. Prepared standard operating procedures for proficiency panel development and testing. Prepared standard operating procedures for newly developed diagnostic procedures. Coordinated international collaborations to obtain reagents and samples for the validation of real-time PCR assays for Classical Swine Fever and Foot and Mouth Disease Virus. Conducted equivalency experiments to scale-up rapid diagnostic assays to a high-throughput format.

Microbiologist, Agricultural Research Service (ARS) USDA PIADC, Orient Point, New York (March 2002-October 2002)

Responsibilities: Performed scientific research on pathogen genomics and the development of rapid diagnostic assays to detect foreign animal diseases.

Duties: Scientific research to include sequencing of the Rinderpest virus genome and the study of gene expression following infection with African Swine Fever Virus. Development and optimization of a rapid diagnostic assay for Rinderpest Virus. Preparation of standard operating procedures for the performance of rapid diagnostic assays for the detection of Foot-and-Mouth Disease Virus and Classical Swine Fever Virus.

Accomplishments: Developed quantitative real-time RT-PCR assays to study host gene expression following infection of swine macrophages with African Swine Fever Virus. This work was published in a peer-

reviewed journal, the Journal of Virology. Sequenced five full length Rinderpest genomes. Supported the development and evaluation of a real-time RT-PCR assay for the detection of Rinderpest Virus.

Animal Program Veterinarian, Science Applications International Corporation (SAIC), National Cancer Institute, Frederick, MD (December 2001-March 2002)

Responsibilities: Supervise research activities in the *In vivo* models program of the National Cancer Institute.

Duties: Manage program to study the effects of novel chemotherapeutic agents in transgenic and inbred strains of mice. Develop and validate assays to identify molecular targets for chemotherapeutics.

Senior Scientist, GeoCenters, U. S. Army Soldier and Biological Chemical Command, Aberdeen Proving Ground, Edgewood, MD (September 2001-December 2001)

Responsibilities: Development and optimization of diagnostic assays to detect pathogens of military importance.

Duties: Development and optimization of diagnostic assays to detect pathogens of military importance. Oversight of laboratory technicians.

Clinical Veterinarian, Merial Limited, Clinical Science Division, Athens, Georgia (June 2001-September 2001)

Responsibilities: Coordinated small animal companion vaccine trials and prepared report for USDA licensure of vaccines.

Duties: Scientific lead for the design and oversight of small animal vaccine trials. Prepared experimental reports for vaccine licensure to be approved by the USDA Center for Veterinary Biologics. Oversight of ten laboratory technicians.

Principal Investigator, United States Army (US Army), United States Army Medical Research Institute for Infectious Diseases (USAMRIID), Frederick, MD (June 1998-June 2001)

Responsibilities: Responsible for diagnostic assay development for BSL-4 pathogens to include Ebola and Marburg Viruses. Responsible for clinical (bleeding and necropsies) and investigative work on animal models of disease (mice, nonhuman primates, and guinea pigs).

Duties: Advanced methods to study host response to viral and bacterial agents in *in vitro* and *in vivo* systems using both human and animal models of disease. Increase the depth and diversity of diagnostic assay targets for Filoviruses and *Yersinia pestis*. Performed *in vitro* and *in vivo* infections with biological safety level 3 and 4 agents. Perform BSL-4 work to include growth, purification, and titrating of viral agents.

Accomplishments: Scientific lead for the development of two TaqMan-based real-time PCR assays for the detection of Ebola and Marburg virus infections, respectively. The real-time PCR assays for the detection of Ebola and Marburg virus were the first rapid tests for these diseases to be run on rapid nucleic acid analysis platforms and “fielded” for use. Scientific lead for the development of real-time RT-PCR assays to study host gene expression following infection of nonhuman primate cells with Ebola virus. Studied pathogenesis and apoptosis in Ebola infected mouse model of disease. Studied the pathogenesis of Ebola virus infection in mice and published this work in a peer-reviewed journal. Published 5 manuscripts in peer-reviewed journals.

PUBLICATIONS

Clavijo A., Nikooienejad A., Shahrokh M., Metz R.P., Schwartz S., Atashpaz-Gargari E., Deliberto T.J., Lutman M.W., Pedersen K., Bazan L.R., Koster L.G., Jenkins-Moore M., Swenson S.L., Zhang M., **Beckham T.**, Johnson C.D., Bounpheng M. 2012. Identification and analysis of the first 2009 pandemic H1N1 influenza virus from U.S. feral swine. *Zoonoses and Public Health Journal*. *Submitted for publication*.

Eberling A, Martin B, Bieker J, McIntosh M, **Beckham TR**. Development, Optimization and Validation of a Classical Swine Fever Virus Real-Time RT-PCR Assay. (2011) *J Vet Diagn Invest* 23(5):994-998.

Das A, **Beckham TR**, McIntosh M: 2011, Comparison of methods for improved RNA extraction from blood for

early detection of classical swine fever virus by real-time reverse transcription polymerase chain reaction. *J Vet Diagn Invest* 23(4):727-735.

Valarcher JF, Knowles NJ, Zakharov V, Scherbakov A, Zhang Z, Shang YJ, Liu ZX, Liu XT, Sanyal A, Hemadri D, Tosh C, Rasool TJ, Pattnaik B, Schumann KR, **Beckham TR**, Linchongsubongkoch W, Ferris NP, Roeder PL, Paton DJ. Multiple origins of foot-and-mouth disease virus serotype Asia 1 outbreaks, 2003-2007. (2009) *Emerg Infect Dis.* 15(7):1046-51.

Paixao TA, Neta AV, Paiva NO, Reis JR, Barbosa MS, Serra CV, Silva RR, **Beckham TR**, Martin BM, Clarke NP, Adams LG, Santos, RL. Diagnosis of foot-and mouth disease by real time reverse transcription polymerase chain reaction under field conditions in Brazil. (2008) *BMC Vet Res.* Dec 31;4:53.

Schumann KR, Knowles NJ, Davies PR, Midgley RJ, Valarcher JF, Raoufi AQ, McKenna TS, Hurtle W, Burans JP, Martin BM, Rodriguez LL, **Beckham TR**. Genetic characterization and molecular epidemiology of foot-and-mouth disease viruses isolated from Afghanistan in 2003-2005. (2008) *Virus Genes.* 36(2):401-13.

Fosgate GT, Tavoranpanich S, Hutner D, Pugh R, Sterlie JA, Schumann KR, Eberling, AJ, **Beckham TR**, Martin BM, Clarke NP, and LG Adams. Diagnostic specificity of a real-time RT-PCR in cattle for foot-and-mouth disease and swine for foot-and-mouth disease and classical swine fever based on non-invasive specimen collection. (2008) *Veterinary Microbiology.* 132(1-2): 158-164.

King DP, Ferris NP, Shaw AE, Reid SM, Hutchings GH, Giuffre AC, Robida JM, Callahan JD, Nelson WM and **Tammy R Beckham**. Detection of foot-and-mouth disease virus: comparative diagnostic sensitivity of two independent real-time RT-PCR assays. (2006) *J. Vet. Diag. Investigation.* Jan;18(1):93-7.

Deng MY, Wang H, Ward GB, **Beckham TR**, McKenna TS. Comparison of six RNA extraction methods for the detection of classical swine fever virus by real-time and conventional reverse transcription-PCR. (2005). *J Vet Diagn Invest.* Nov;17(6):574-8.

Afonso CL, Piccone ME, Zaffuto KM, Neilan J, Kutish GF, Lu Z, Balinsky CA, **Gibb TR**, Bean TJ, Zsak L, Rock DL. African swine fever virus multigene family 360 and 530 genes affect host interferon response. (2004) *J Virol,* 78(4):1858-64.

Gibb TR, Norwood DA, Woollen N, Henchal EA. Characterization of Viral Replication and Host Gene Expression in Alveolar Macrophages Infected with Ebola Virus (Zaire strain). (2002) *Clin Diagn Lab Immunol,* 9(1):19-27.

Gibb TR, Norwood DA, Woollen N, Henchal EA. Development and Evaluation of a Fluorogenic 5'Nuclease Assay to Detect Marburg Virus. (2001) *Molecular and Cellular Probes,* 15:259-266.

Gibb TR, Norwood DA, Woollen N, Henchal EA. Development and Evaluation of a Fluorogenic 5'Nuclease Assay to Detect Ebola-Zaire and Ebola-Sudan Virus. (2001) *Journal of Clinical Microbiology,* 39(11):4125-4130.

Gibb TR, Bray M, Geisbert TW, Steele KE, Kell WM, Davis KJ, Jaax NK. Pathogenesis of Experimental Ebola-Zaire Infection in the BALB/c mouse. (2001) *Journal of Comparative Pathology,* 125(3):233-242.

Geisbert TW, Hensley L, **Gibb TR**, Steele K, Jaax N, and Jahrling P. Apoptosis induced in vitro and in vivo during infection by Ebola and Marburg viruses. (2000) *Laboratory Investigation,* 68(3):139-46.

RESEARCH SUPPORT

Beckham (PI)

Department of Homeland Security, Renewal of the Foreign Animal and Zoonotic Disease Defense Center

2010-2011	\$1.9 million
2011-2012	\$2.6 million
2012-2013	\$1.247 million
2013-2014	\$1.5 million
2014-2015	\$1.5 million

Beckham (PI)

1/2011-12/2015

\$236,000

United States Department of Agriculture

Pathways to Global Agricultural Biosecurity: A Graduate-Level Career Development Training Program from the National Center for Foreign Animal and Zoonotic Disease Defense (FAZD Center)

Beckham (PI)

6/2010-5/2012

\$972,901

United States Department of Agriculture

Development of Emergency Response Support System

Beckham (PI)

9/2011-1/2013

\$857,908

United States Department of Agriculture, Foreign Agriculture Services

Development and Implementation of a LIMS and Bio-Surveillance Program for FMD in Pakistan Veterinary Diagnostic Laboratories

Beckham (PI)

8/2011-5/2013

\$303,108

United States Department of Homeland Security

Fourth International Symposium on Managing Animal Mortality and Health

Beckham (PI)

9/2011 -11/2012

\$694,805

United State Department of Homeland Security

Workshops to Enhance the Agricultural Enterprise

Beckham (PI)

9/1/2009 – 8/31/2012

\$778,000

United States Department of Agriculture

National Animal Health Laboratory Network (NAHLN) for the Food and Agriculture Defense Initiative

REPRESENTATIVE PRESENTATIONS

“The Capabilities of the National Animal Health Laboratory Network,” USDA ARS 1st International Biosafety and Biocontainment Symposium, Baltimore, MD. February 2011

“Valuing One Health: Opportunities and Challenges for Veterinary Diagnostic Laboratories,” One Health AAVLD Plenary Session, Minneapolis, MN. November 2010

“Understanding Rift Valley Fever”, Beef Cattle Short Course, Texas A&M University, August 2010

FAZD Overview, Homeland Security Science and Technology Advisory Council, August 2010

Briefings on Interim Charges, House Agriculture and Livestock Committee and Senate Committee on Agriculture and Rural Affairs, Texas 81st Legislative Session, Spring 2010

Operation Palo Duro: Policy and Decision-making in Response to an FMD Outbreak (October 23rd, NAHLN Symposium, USAHA, 2009)

Emergency Response, a Laboratory Perspective, Panhandle Regional Planning Preparedness Conference, Jan 2009

How to Ensure Security-National Bio-and Agro-Defense Facility (NBAF) on the Mainland Issues, Academy of Veterinary Consultants, December 2008

APPOINTMENTS

Texas A&M University, College of Veterinary Medicine, Department of Veterinary Pathobiology, Adjunct Faculty Member (2009-present)

PROFESSIONAL ORGANIZATIONS & DEVELOPMENT

American Association of Veterinary Laboratory Diagnosticians (AAVLD)

United States Animal Health Association (USAHA)

- Vice Chair, Foreign and Emerging Disease Committee (2009-present)

Texas Veterinary Medical Association (TVMA)

NAHLN Directors Committee

US National Agriculture Sector Coordinating Council

Institutional Biological Safety Committee, Texas A&M University

College of Veterinary Medicine Executive Committee, Texas A&M University

Senior Executive Service Training, USDA, American University, Certificate of Achievement, Key Executive Leadership, October 2008

CERTIFICATIONS

Veterinary Medical License, State of Maryland, since 1999

SECURITY CLEARANCE

Top Secret, SSBI, February 2006

LBI, September 2003

PERSONAL

Military Status: US Army, Captain, 6/98-6/01, Honorable Discharge

Citizenship: United States

Maiden Name: Tammy Gibb