

SANJAY M. REDDY, BVSC, PH.D., DIPLOMATE ACVM

Title:

Associate Professor, Veterinary Pathobiology,
College of Veterinary Medicine and Biological Sciences, Texas A&M University

Project Role:

Co-Investigator: Avian influenza (AI) virus diagnostics.

Project Responsibilities:

To develop differential diagnostic Luminex-based multiplex assays for select agents of poultry.

Relevant Expertise:

Dr. Reddy's expertise is in the area of viral pathogenesis and translational medicine. He is a diplomate of the American College of Veterinary Microbiologists (ACVM) and serves on the ACVM's Biosecurity Task Force. The mission of this Task Force is to assist local, state, and federal officials in prevention of, response to, and recovery from infectious diseases that threaten food security or public health. Dr. Reddy is a trained molecular virologist and has developed patented poultry vaccines that are being evaluated for commercialization by Merial, a global animal health company. His laboratory is currently developing AI vaccines with DIVA properties, and has evaluated the use of E-beam irradiation technology to pasteurize poultry meat and egg products contaminated with AI virus for recovery of export markets after an outbreak of AI.

Education and Training:

A.P. Agricultural University-India	B.V.S.	1986	Veterinary Medicine
University of Maryland-College Park	M.S.	1989	Virology
University of Maryland-College Park	Ph.D.	1994	Molecular Virology

Professional Appointments:

1986-1987	Technical Service Representative, Venkateshwara Hatcheries, India
1988-1994	Research Assistant, VA-MD Regional College of Veterinary Medicine, University of Maryland, College Park, MD
1994-1997	Postdoctoral Research Associate, Laboratory of Clinical Investigation, National Institute of Allergy and Infectious Disease, NIH, Bethesda, MD
1997-2002	Veterinary Medical Officer, Avian Disease and Oncology Laboratory, Agriculture Research Service, USDA, East Lansing, MI
2002-Present	Associate Professor, Department of Veterinary Pathobiology, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University

Honors:

1993	Diplomate, ACVM; certified in virology
1995-1997	Fogarty Intramural Research Training Award, NIH
2001	Bayer-Snoeyenbos New Investigator Award, American Assoc. of Avian Pathologists
2006-Present	Editorial Board Member, <i>Avian Diseases</i>
2006-Present	Biosecurity Task Force Member, American College of Veterinary Microbiologists

Relevant Publications:

1. Brahmakshatriya, V., B. Lupiani, J.L. Brinlee, M. Cepeda, S.D. Pillai, and S.M. Reddy. Preliminary studies for inactivation of avian influenza virus (AIV) in poultry products using electron beam (E-beam) irradiation. *Avian Pathology*. Accepted for publication.
2. Ajithdoss, D., S.M. Reddy, P.F. Suchodolski, L.F. Lee, H.J. Kung, and B. Lupiani. 2009. In vitro characterization of the Meq proteins of Marek's disease virus vaccine strain CVI988. *Virus Research* In press.
3. Suchodolski, P., Y. Izumiya, B. Lupiani, D. Ajithdoss, O. Gilad, L.F. Lee, H-J. Kung and S.M. Reddy 2009. Homodimerization of Marek's disease virus encoded Meq protein is not sufficient for transformation of lymphocytes in chicken. *Journal of Virology*. 83 (2): 859-69.
4. Watson D.S., Reddy S.M., Brahmakshatriya V. and Lupiani B. (2008) A multiplexed immunoassay for detection of antibodies against avian influenza virus. *Journal of Immunological Methods*. In press. Nov 8. [Epub ahead of print] doi:10.1016/j.jim.2008.10.007.
5. Lee, L.F., Lupiani B., Silva S., Kung H.J. and Reddy S.M. 2008. Recombinant Marek's disease virus (MDV) lacking the *Meq* oncogene confers protection against challenge with a very virulent plus strain of MDV. *Vaccine* 26 (15): 1887-1892.

Research Support:

Title: Evaluation of E-beam pasteurization for inactivation of avian influenza virus in chicken meat and egg products

Contract No: 2005-3560515388 PI: Reddy 2007-2009

Amount: \$38,700

Agency: CSREES/NRI/AICAP1

Summary: Evaluating E-beam irradiation technology for decontamination of poultry products.

Title: Enhancing avian influenza vaccine efficacy using toll-like receptor ligands for rapid induction of immune response

Contract No: 2008-55204-18863 (Z521905) PI: Reddy 2008-2009

Amount: \$56,136

Agency: CSREES/NRI/AICAP2

Summary: Improving AI vaccine efficacy by using toll-like receptor ligands in killed vaccines.

Title: Gene expression profiling of different Mx genotypes in avian influenza virus infected embryo and chickens.

Contract No: PO-35060 PI: Zhou 2007-2009

Amount: \$134,657

Agency: Cobb-Vantress Co.

Summary: The Mx gene is involved in influenza pathogenesis, and we are evaluating whether or not this gene could be exploited in breeding programs to generate chickens that are resistant to infection.

Role: Co-Investigator

Title: Develop candidate detection systems and modern poultry vaccines for avian influenza.

Contract No: 2007-ST-061-000002-02 PI: Reddy 2008-2010

Amount: \$110,400

Agency: DHS (FAZD)

Summary: Developing AI vaccines that could be differentiated based on the reactivity to the NS1 gene product in infected chickens.