

## **D. MARK ESTES, PH.D.**

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### **Title:**

Professor and Senior Scientist, Department of Pediatrics, School of Medicine,  
The University of Texas Medical Branch, Galveston, TX  
Director, Program in Immunology, Institute for Human Infections and Immunity,  
The University of Texas Medical Branch, Galveston, TX  
Director, Department of Pediatrics, Division of Vaccinology, School of Medicine,  
The University of Texas Medical Branch, Galveston, TX

**Project Role:** Project Principle Investigator

**Project Responsibilities:** Oversee the design and execution of project protocols and training of graduate students and postdoctoral fellows in immunology and vaccinology.

### **Relevant Expertise:**

Dr. Estes brings 24 years of experience in comparative immunology to the project. His laboratory investigates several aspects of basic and applied immunoregulation and immunobiology. His research is focused on development of xenotransplant models for studying the human immune response to biodefense and other pathogens in addition to vaccine and therapeutics development for a variety of intracellular pathogens. He is also working on developing models in neuroimmunology as it applies to infection with viruses and bacteria in the CNS.

### **Education and Training:**

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|--|---------|------|------------------------|
| Texas Tech University                      | B.S.    | 1982 | Microbiology/Chemistry |
| Texas A&M University                       | Ph.D.   | 1988 | Genetics               |
| University of Texas Health Sciences Center | Postdoc | 1992 | Immunology             |

### **Professional Appointments:**

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|--------------|---|
| 2003-Present | Professor, Department of Pediatrics, School of Medicine,<br>University of Texas Medical Branch, Galveston, TX                                 |
| 2003-Present | Senior Scientist, Sealy Center for Vaccine Development,<br>University of Texas Medical Branch, Galveston, TX                                  |
| 2004-Present | Member, Center for Biodefense and Emerging Infectious Diseases  |
| 2004-Present | Visiting Professor, University of the Western Cape, Cape Town,<br>Republic of South Africa  |
| 2006-Present | Adjunct Professor, Department of Immunology, Institute for Human Infections<br>and Immunity, M.D. Anderson Cancer Center, University of Texas |
| 2006-Present | Director, Program in Immunology, Institute for Human Infections and<br>Immunity, University of Texas Medical Branch, Galveston, TX            |
| 2008-Present | Director, Division of Vaccinology, Department of Pediatrics,<br>School of Medicine, University of Texas Medical Branch, Galveston, TX         |
| 2008-Present | Core Director Immunology, Galveston National Laboratory   |

### Relevant Publications (Selected from 66):

1. Endsley, J.J., A Hogg., Lis J. Shell, M. McAulay, T. Coffey, C. Howard, C.F. Capinos-Scherer, W.R. Waters, B. Nonnecke, D.M. Estes, and B. Villarreal-Ramos. *Mycobacterium bovis* BCG vaccination induces memory CD4+ T cells characterized by effector biomarker expression and antimycobacterial activity. *Vaccine*. 2007; 25:8384-94.
2. Gay, C.G., T.L. Richies, P.P. Pastoret, I. Minguez-Tudela, P. de Baetselier, T. Gobel, B. Goddeeris, P. Kaiser, I. Morrison, J.M. Sanchez-Vizcaino, K. Anderson, L.W. Baillie, W.C. Brown, **D.M. Estes**, E. Herrera, P.L. Nara, C.F. Ockenhouse, J.A. Roth, M.B. Sztein. Advances in immunology and vaccine discovery report of the United States-European Commission workshop. *Vaccine*. 2007; 25:7007-11.
3. Maue A.C., W.R. Waters, M.V. Palmer, B.J. Nonnecke, F.C. Minion, W.C. Brown, J. Norimine, M.R. Foote, C.F.C. Scherer and **D.M. Estes**. An ESAT-6:CFP10 DNA vaccine administered in conjunction with *Mycobacterium bovis* BCG confers protection to cattle challenged with virulent *Mycobacterium bovis*. *Vaccine*. 2007; 25:4735-46.
4. Narita S., R.M. Goldblum, C.S. Watson, E.G. Brooks, **D.M. Estes**, E.M. Curran, and T. Midoro-Horiuti. Environmental estrogens induce mast cell degranulation and enhance IgE-mediated release of allergic mediators. *Environ Health Perspect*. 2007; 115:48-52.
5. Paessler S., N.E. Yun, B.M. Judy, N. Dziuba, M.A. Zacks, A.H. Grund, I. Frolov, G.A. Campbell, S.C. Weaver and **D.M. Estes**. Alpha-beta T cells provide protection against lethal encephalitis in the murine model of VEEV infection. *Virology*. 2007; 367:307-23.

### Research Support:

**Title: Oglufanide Disodium—a Countermeasure for Biothreat Agents**

Contract No: HDTRA1-07-TMTI BAA B.2 PI: Estes/Torres 10/2007-08/14/10

Agency: Subcontract Implicit Bioscience Pty Ltd HDTRA1-07-9-2003  
Defense Threat Reduction Agency (DTRA)

Summary: The ability to conduct preclinical evaluation in well-characterized and validated small animal models of human infections is critical for the development of therapeutics and preventatives for human use.

Role: Principal Investigator

**Title: Rickettsial infection of humanized mice. Western Regional Center of Excellence for Biodefense and Emerging Infectious Diseases (WRCE)**

Contract No: U54 AI 057156 PI: Walker 12/2006-02/2009

Agency: NIH/NIAID Valbuena G

Summary: Reflected in the title.

Role: Principal Investigator

**Title: Small Animal Model Development and Proof-of-Concept Testing of Therapeutics and Vaccines in Small Animal models of *Burkholderia* and *Rickettsial* Diseases**

Contract No: N01-AI-30065 Part C (19) PI: Stanberry 10/2006-8/2009

Agency: NIH-NIAID

Summary: Reflected in the title

Role: Project Leader