

Biographical Sketch

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Waithaka Mwangi		POSITION TITLE Assistant Professor, Veterinary Pathobiology, College of Veterinary Medicine, Texas A&M University	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Nairobi, Kenya	B.S.	1990	Biochemistry/Parasitology
Washington State University	Ph.D.	2002	Immunology
Washington State University	Post-Doc	2004	Immunology

NOTE: The Biographical Sketch may not exceed four pages. Items A and B may not exceed two of the four-page limit.

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

PROFESSIONAL EXPERIENCE AND ACADEMIC APPOINTMENTS:

1990 -1996	Research Associate, International Livestock Research Institute (ILRI), Nairobi, Kenya
1997-2002	Graduate Research Assistant, Department of Veterinary Microbiology and Pathology, Washington State University
2002-2004	Post-Doctoral Research Fellow, Department of Veterinary Microbiology and Pathology, Washington State University
2004-2005	Assistant Professor (non-tenure track) and Graduate Faculty, Department of Veterinary Microbiology and Pathology, Washington State University
2005-present	Assistant Professor (tenure-track) and Graduate Faculty, Department of Veterinary Pathobiology, Texas A&M University
2006-present	Faculty, NIH/Life Sciences Training T32 Grant (Mechanistic Studies at the Host Pathogen Interface), The Texas A&M University System
2007-present	Faculty, The Center for Microencapsulation and Drug Delivery, The Texas A&M University System

AWARDS AND HONORS:

1998-present	Phi Kappa Phi Honor Society
2003-2004	NIH Immunology Training Grant (Ruth L. Kirschstein National Research Service Award)
2004	American Association of Veterinary Immunologists (AAVI) Travel Award for the 7 th International Veterinary Immunology Symposium in Quebec, Canada
2006	American Association of Immunologists (AAI) Travel Award for the 2006 Annual Meeting in Boston, MA
2007	American Association of Immunologists Travel Award for the 2007 Annual Meeting in Miami, FL

PROFESSIONAL ORGANIZATIONS:

2002-present American Association of Immunologists (AAI)

B. Selected (>180) peer-reviewed publications (in reverse chronological order). Do not include publications submitted or in preparation.

- 1. Mwangi, W.,** W. C. Brown, G. A. Splitter, C. J. Davies, C. J. Howard, J. C. Hope, Y. Aida, Y. Zhuang, B. J. Hunter, and G. H. Palmer. 2007. DNA vaccine construct incorporating intercellular trafficking and intracellular targeting motifs effectively primes and induces memory B and T cell responses in outbred animals. *Clin. Vaccine Immunol.* 14 (3):304-311.

2. Zhuang, Y., **Mwangi, W.**, Brown, W.C., Davis, W.C., Hope, J.C., and Palmer, G.H. 2006. Characterization of a Phenotypically Unique Population of CD13⁺ Dendritic Cells Resident in the Spleen. *Clin. Vaccine Immunol.* 13:1064-1069.
3. **Mwangi, W.**, W.C. Brown., G.A. Splitter., and G.H. Palmer. 2006. Immunization at a DC-enriched intradermal site with a DNA vaccine capable of intercellular spreading and intracellular endosome/lysosome targeting primes robust CD4⁺ T cell responses. *J. Immunology*, 176: S102
4. **Mwangi W**, Brown WC, Splitter GA, Zhuang Y, Kegerreis K, Palmer GH. (2005) Enhancement of antigen acquisition by dendritic cells and MHC class II- restricted epitope presentation to CD4+ T cells using VP22 DNA vaccine vectors that promote intercellular spreading following initial transfection. *J. Leukoc. Biol.*, 78(1):401-11.
5. Hope JC, Kwong LS, Thom M, Sopp P, **Mwangi W**, Brown WC, Palmer GH, Wattedegera S, Entrican G, Howard CJ. (2005 Jun) Development of detection methods for ruminant interleukin (IL)-4. *J. Immunol. Methods*, 301(1-2):114-23.
6. **Mwangi, W.**, Brown, W.C., Lewin, H.A., Howard, C.J., Hope, J.C., Caplazi, P., Baszler, T.V., Abbott, J.R., and Palmer, G.H. (2002) DNA encoded FLT3 Ligand and GM-CSF increase dendritic cell recruitment to the inoculation site and enhance antigen-specific CD4+ T cell responses induced by DNA vaccination of outbred animals. *Journal of Immunology*, 169:3837-3846.
7. Brown, W.C., McGuire, T.C., **Mwangi, W.**, Kegerreis, K.A., Macmillan, H., Lewin, H.A., and Palmer, G.H. (2002) MHC class II DR restricted memory CD4+ T lymphocytes recognize conserved immunodominant epitopes of *Anaplasma marginale* Major Surface Protein 1a (MSP1a). *Infection and Immunity*, 70:5521-5532.
8. Shoda LK, Kegerreis KA, Suarez CE, **Mwangi W**, Knowles DP, and Brown WC. (2001) Immunostimulatory CpG-modified plasmid DNA enhances IL-12, TNF-alpha, and NO production by bovine macrophages. *Journal of Leukocyte Biology*, 70:103-12.
9. **Mwangi W**, Brown WC, and Palmer GH. (2000) Identification of fetal liver tyrosine kinase 3 (flt3) ligand domain required for receptor binding and function using naturally occurring ligand isoforms. *The Journal of Immunology*, 165:6966-74.
10. Honda Y, **Waithaka M**, Taracha EL, Duchateau L, Musoke AJ, and McKeever DJ. (1998) Delivery of the *Theileria parva* p67 antigen to cattle using recombinant vaccinia virus: IL-2 enhances protection. *Vaccine*, 16:1276-82.

C. Research Support. List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and responsibilities of principal investigator identified above.

2005-2008

USDA-CSREES - Improving vaccine efficacy by directed priming of CD4⁺ and CD8⁺ T Cells (PI)

2005-2006

USAID - Evaluation of the utility of DNA-encoding FLT3L & GM-CSF to enhance immunogenicity of a *Theileria parva* DNA Vaccine (co-PI)

2006-2008

DOD-ARMY-MEDICAL RESEARCH AND MATERIAL COMMAND - Micro-encapsulation and vaccine delivery (co-PI)