

BIOGRAPHICAL SKETCH

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

NAME		POSITION TITLE	
Tonatiuh Melgarejo, DVM MS PhD		Assistant Professor – Human Nutrition	
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
National A. University of Mexico	DVM	1986	Veterinary Medicine
Purdue University	MS	1993	Clinical Sciences
Purdue University	PhD	1998	Comparative Physiology
University of Pennsylvania	Residency	2001	Internal Medicine

A. Positions and Honors.

- 1989 - 1991 Assistant Professor, Internal Medicine Section. Small Animal Teaching Hospital, National A. University of Mexico, Mexico City, MX
- 1991 - 1992 Research Assistant, Dept. of Clinical Sciences, College of Veterinary Medicine, Kansas State University, Manhattan, KS
- 1992 - 1997 Research Assistant, Veterinary Clinical Sciences, College of Veterinary Medicine, Purdue University, West Lafayette, IN
- 1997 - 1998 Clinical Research Associate, Small Animal Medicine and Surgery, College of Veterinary Medicine, Texas A&M University, College Station, TX
- 1997 - 1999 Veterinary Clinical Associate (Rotating Internship), Small Animal Medicine and Surgery. College of Veterinary Medicine. Texas A&M University
- 1999 - 2001 Resident in Small Animal Internal Medicine. Dept. of Clinical Studies, SVM. University of Pennsylvania Philadelphia, PA.
- 2001 - 2003 Assistant Professor, Clinical Nutrition & Small Animal Medicine. Department of Clinical Sciences. College of Veterinary Medicine. Kansas State University
- 2003 - Assistant Professor, Department of Human Nutrition. College of Human Ecology. Kansas State University

Awards and Honors

College of Human Ecology College, Kansas State University, Faculty Outstanding Research Award. Kansas State University. May 11, 2007

Honor Society of Veterinary Medicine. *Phi Zeta*, Omicron Chapter. School of Veterinary Medicine. Kansas State University. 2002

ACVIM research award for outstanding research oral presentation. 19th Annual American College of Veterinary Internal Medicine Congress. Denver, Colorado, 2001.

ACVIM travel award, 19th Annual American College of Veterinary Internal Medicine Congress. Denver, Colorado, 2001.

□ Principal Investigator/Program Director (Melgarejo Tonatiuh DVM PhD):

Invited outstanding research presentation at the plenary session of the European Society of Veterinary Internal Medicine (ESVIM) Congress. Dublin, Ireland, 2001.

Comparative Gastroenterology Society's award. Outstanding research oral presentation. 14th Annual American College of Veterinary Internal Medicine Congress. San Antonio, Texas, 1996.

Comparative Gastroenterology Society's award. Outstanding research oral presentation. 11th Annual American College of Veterinary Internal Medicine Congress. Orlando, Florida, 1993.

Honor Society of Agriculture. *Gamma Sigma Delta*. Recognition of high scholarship and outstanding achievement. Purdue University. 1994

Outstanding Research Assistantship Award. College of Veterinary Medicine. National A. University of Mexico. 1991-1993

University committee on academic merit. Silver medal "Gabino Barreda". In recognition of the graduate students of the year. National A. University of Mexico. Mexico City, Mexico. 1991

Mexican Association of Small Animal Practitioners. Alfonso Alexander's award. Outstanding oral presentation by a new member. Area of Internal Medicine. Puebla, Mexico. 1988

B. Selected Peer-reviewed publications

Melgarejo T, Williams DA, Griffith G. Isolation and characterization of α_1 -protease inhibitor (α_1 .PI) from canine plasma. *Am J Vet Res* 1996; 57:258-263. (senior/corresponding author)

Melgarejo T, Williams DA, Asem E. Enzyme-linked immunosorbant assay for canine α_1 -protease inhibitor (α_1 .PI). *Am J Vet Res*. 1998;59:127-130. (senior/corresponding author)

Melgarejo T, DA Williams, KDR Setchell, N O'Connell. Serum Unconjugated bile acids as a test for small intestinal bacterial overgrowth in dogs. *Digestive Diseases and Sciences*. 2000;45:407-414 (senior/corresponding author)

Vaden SL, Sellon RK, **Melgarejo LT**, Williams DA, Trogdon MM, VanCamp SD, Argenzio R. Evaluation of intestinal permeability and gluten sensitivity in soft coated wheaten terriers with familial protein-losing enteropathy and/or protein-losing nephropathy. *Am J Vet Res*. 2000;61:518-524

Vaden SL, Hammerberg B, Davenport DJ, Orton SM, Trogdon MM, **Melgarejo LT**, VanCamp SD, Williams DA. Gastroscopic food sensitivity testing, dietary provocation and fecal IgE in soft coated wheaten terriers with protein-losing enteropathy and/or protein-losing nephropathy. *J Vet Int Med*. 2000;14:60-67

Steiner JM, Williams DA, Moeller EM, **Melgarejo T**. Development and validation of an enzyme-linked immunosorbent assay for feline trypsin-like immunoreactivity. *Am J Vet Res* 2000;61:620-623 (senior/corresponding author)

Gionfrido JR, **Melgarejo T**, Fults E, Krohne, Asem EP. Comparison of tear protein components of llama and cow. *Am J Vet Res*. 2000;61[10]:1289-93

Annika Linde, Nuala J. Summerfield, Matthew Johnston, Angela Keffer, **Tonatiuh Melgarejo**, Evelyn Ivey. Echocardiography in the Chinchilla. *J Vet Int Med* 2004(18):772-774

Sang Y, Ortega MT, Blecha F, Prakash O, **Melgarejo T**. Molecular cloning and characterization of three beta-defensins from canine testes. *Infect Immun*. 2005 May;73(5):2611-20. (senior/corresponding author)

Linde A, Summerfield NJ, Sleeper MM, Wright FB, Clifford CA, **Melgarejo T**, Knight DH: Pilot Study on Cardiac Troponin I Levels in Dogs with Pericardial Effusion; *J Vet Cardiology* 2006 (8): 19-23

Linde A, Mosier D, Blecha F, and **Melgarejo T**: Innate Immunity and Inflammation – New Frontiers in Comparative Cardiovascular Pathology, *Cardiovascular Research* 2007 (73): 26-36 (senior/corresponding author)

Yongming Sang, M. Teresa Ortega, Kristina Rune, Wang Xiau, Guolong Zhang, Jose L. Soulages, Gerald H. Lushington, Jianwen Fang, Todd D. Williams, Frank Blecha, **Tonatiuh Melgarejo**: Canine Cathelicidin (K9CATH): gene cloning, expression, and biochemical activity of a novel pro-myeloid antimicrobial peptide, *Dev Comp Immunol.* 2007; 31 (12): 1278-96 – (senior/corresponding author)

Annika Linde, Frank Blecha, **Tonatiuh Melgarejo**: Toll-Like Receptor (TLR) 2 and TLR4 Gene Expression in Canine Heart; *American Journal of Animal and Veterinary Sciences* 2007 2 (1): 6-10 (senior/corresponding author)

Linde A, Ross C, Davis E, Dib L, Blecha F, **Melgarejo T**: Innate Immunity and Host Defense Peptides: Role in Veterinary Medicine; *Journal of Veterinary Internal Medicine* 2008 (22): 247-265 (senior/corresponding author)

Annika Linde, Gerald H. Lushington, Frank Blecha, **Tonatiuh Melgarejo**: Rat Cardiomyocytes Express a Classical Epithelial Beta-Defensin; *American Journal of Animal and Veterinary Sciences* 2008; 3 (1): 1-6 (senior/corresponding author)

Luis Tinoco, Alberto Barreras-Serrano, Gilberto López-Valencia, Alma Rossana Tamayo-Sosa, Héctor Quiroz-Romero, **Tonatiuh Melgarejo**: Seroprevalence of larva migrans of *Toxocara canis* and evaluation of associated risk factors among children in a Mexico-U.S. border region. *Int J of Appl Res in Vet Med.* 2008; 6 (2): 130-136 (Senior author)

The following list includes selected articles **submitted** to peer-reviewed scientific journals:

Annika Linde, **Tonatiuh Melgarejo**: Interventional treatment of pericardial effusion: *Journal of Veterinary Emergency and Critical Care* – submitted June 2008 – (senior/corresponding author)

Linde A, Wachter B, Höner O, Dib L, Ross C, Blecha F, **Melgarejo T**: Natural History of Innate Host Defense Peptides: A Travel through Time in Search of Novel Antibiotics; *Biological Reviews* – submitted June 2008 – (senior/corresponding author)

Linde A, Ross C, Blecha F, Lushington G, Hanson A, Dib L & **Melgarejo T** (2008): Cardiac Beta-Defensins: Novel Antimicrobial and Immunomodulatory Host Defense Peptides with Enhanced Expression in Inflammation; *Circ Res* (senior/corresponding author) - will be submitted on July 2008 -

C. Registered genes

Melgarejo et al (2005): Canine familiaris beta-defensin-like peptide 3 mRNA (GenBank Reg.No. AY169792)

Melgarejo et al (2005): Canine familiaris beta-defensin-like peptide 2 mRNA (GenBank Reg.No. AY169791)

Melgarejo et al (2005): Canine familiaris beta-defensin-like peptide 1 mRNA (GenBank Reg.No. AY169790)

Melgarejo et al (2003): Canine familiaris cathelicidin mRNA (GenBank Reg.No. AY392089)

D. USA Patents

Melgarejo et al: Cathelicidin antimicrobial peptides; Docket No. 36880-PRO. Temporary Patent filed on December 30th, 2005 Technology Transfer Office, Kansas State University.

Melgarejo et al: Cathelicidin antimicrobial peptides; Permanent USA and International Patent filed at the United States Patent and Trademark Office (Disc 06-11) on Dec 29th, 2006.

E. Research Support

PAST

1) P20 RR017686 (MARCUS) 7/01/2003-12/30/2007

Amount: \$508,500.00

Program funded by the NIH, NCCR as a center for Biomedical Research excellence (COBRE) award. *"Molecular Cloning and Characterization of a novel family of epithelia-derived host defense peptides from dog origin"*.

Role: PI

The major goal of this project is to elucidate upon the role of canine epithelial-derived antimicrobial peptides as part of the innate immune host response towards microbial pathogens.

2) 044-2006 Melgarejo (PI) 12/30/2006-12/31/2007

Amount: \$50,000.00

Proposal granted and funded by the Kansas State University Foundation, The African Studies Center and the College of Human Ecology. *"Seminal Studies on the Innate Immune Mechanisms of Defense of the African Spotted Hyena – Crocuta crocuta"*.

Role: PI

This pilot project is aimed at tissue collection from wild-living hyenas (field studies)

ACTIVE

3) GHHN600665, BG0866 Melgarejo (PI) 7/01/2007-6/30/2009

Amount: \$400,000

Proposal granted and funded by corporate sponsor. *"Studies on the Innate Immunity of Canis familiaris: Not familiar after all"*

Role: PI

Confidentiality agreement prevents further information disclosure on this project.

4) 001001-2008. Melgarejo (PI) 06/01/2008-05/31/2011

Amount: \$500,000

Proposal granted and funded by corporate sponsor. *"Hyena hygiene: not a laughing matter"*

Role: PI

Confidentiality agreement prevents further information disclosure on this project.