

Curriculum Vitae
Shane Campbell Burgess

Education

1989 B.V.Sc with distinction (DVM equivalent), Massey University, New Zealand.

1998 Ph.D. Faculty of Medicine, Bristol University, UK. “Investigations into host cell-virus relationships and tumour immunity in Marek’s disease”.

Professional appointments and affiliations

Feb 1 2009– present: Associate Dean for Strategic Initiatives and Economic Development, College of Veterinary Medicine. Mississippi State University, Mississippi, USA.

October 1 2008 – present. Nominated and selected as USDA NRSP8:National Animal Genome Research Program, Bioinformatics Committee Member.

August 1 2008 – present. President Elect, Mississippi Academy of Sciences.

July 1 2008 – present. Elected National Executive Committee member Food Systems Leadership Institute

July 1 2008 – Present. Professor. Department of Basic Sciences, College of Veterinary Medicine, Mississippi State University, Mississippi, USA.

Oct 2007 – Present. Board member Mississippi Biotechnology Association.

Feb 1 2007 - Present: Director MSU Life Sciences and Biotechnology Institute.

Nov 2006- Present: Affiliate Faculty, Center for Computational Sciences.

June 2006-Present. Founder Member of the Mississippi Computational Biology Consortium

Jan 2006- Present: Co-Founder & Co-Director MSU Institute for Digital Biology.

2004-Present: Institute for Neurocognitive Science and Technology (INST) Fellow, Mississippi State University, Mississippi, USA.

July 1 2005-June 30 2008: Associate Professor. Department of Basic Sciences, College of Veterinary Medicine, Mississippi State University, Mississippi, USA.

2002- June 30 2005: Assistant Professor. Department of Basic Sciences, College of Veterinary Medicine, Mississippi State University, Mississippi, USA.

April 2001- August 2001: Institute for Animal Health, (IAH), Pirbright laboratory: World Reference Laboratory for Exotic Animal Disease during Foot and Mouth Disease crisis.

1998-2001: Senior Research Scientist (Associate Professor equivalent). IAH, Compton, UK.

1995 -1998; Veterinary Research Fellow. Institute for Animal Health Compton.

1993 -1995: Divisional Veterinary Manager. Marine Harvest International, Edinburgh.

1992 -1993: Veterinary Surgeon, private practice, UK.

1991 -1992 : A. Residency in radiology and diagnostic imaging. Murdoch University, Department of Clinical Studies, Perth, Australia and *concurrently* B. Emergency Clinic Veterinary Surgeon. Perth, Australia.

1989 – 1991: Veterinary Surgeon. Private practice, Perth, Western Australia.

Awards and Honors

2008 Graduated Fellow of the Food Systems Leadership Institute.

2008 Appointed by Mississippi Commissioner of Higher Education, Dr. Thomas C. Meredith, as one of 12 appointed members of the 27-person Mississippi State University Presidential Search Advisory Committee.

2008 Selected by MSU VP for Research and Economic Development as one of 12 members of a University-wide committee to identify 5 strategic research priority areas for MSU.

2007 Selected as one of 20 faculty for inaugural MSU Academic and Research Leadership Program.

2007-2008 Elected Vice-President of the MSU Division of Agriculture, Forestry and Veterinary Medicine Faculty Senate.

2007 Elected as member of Phi Zeta honor society of veterinary medicine.

2006 Pfizer award for research excellence.

2006 Nominated by MSU VP for Agriculture, and then selected, to be one of 20 Food Systems Leadership Institute Fellows nationwide for 2006-2008 (see: <http://www.fsli.org/>).

2006 MSU Faculty Research Award.

2005 Elected membership to Gamma Sigma Delta, Honor Society of Agriculture.

2004 MSU CVM Dean's Pegasus Award for Research/Creative achievement.

- 2004 Mississippi Agriculture and Forestry Experiment Station award for the Most Outstanding Publication.
- 2002 Institute for Animal Health Director's Award for service in the UK Foot and Mouth Disease Epidemic of 2001.
- 2000 UK Biotechnology and Biological Sciences Institute for Animal Health Exceptional performance award.

A. RESEARCH

Intellectual property

Patents

J. E. Chambers, **S.C. Burgess**, M. E. Dail. 2008. Global proteomic screen for reducing drug candidate attrition. USA Patent office, patent pending.

S.C. Burgess, R. Stocker, A. Cooksey. 2008. Blood biomarkers for selection of superior US Naval Pilots. USA Patent office, patent pending.

S.C. Burgess, S. M. Bridges, D. Paul, M. Lawrence. 2007. The genome sequence of *Oligotropha carboxidovorans* and genetic networks involved in bioenergy production. USA Patent office, patent pending.

D. Kunec **S.C. Burgess**. 2007. DNA sequence for predicting resistance to Marek's disease in chickens. USA Patent office, patent pending.

E. Memilli, D. Penditi, B. Nanduri, **S.C. Burgess**. 2007. Biomarkers of fertility for bulls. USA Patent office, patent pending.

S.C. Burgess, D. Kunec, L. Hanson. 2005. A novel method for constructing viral bacterial artificial chromosomes (BACs) and a channel catfish herpesvirus (CCV) BAC for vaccine and recombinant vaccine production. USA Patent office, patent pending.

Kumar, A., Y. Fang-Yu, **S. C. Burgess**, and J. P. Singh. 2005. Fibre Optic Laser-Induced Breakdown Spectroscopy Device and Methods of Use in Characterization of Malignant Tissue Cells Using Laser Induced Breakdown Spectroscopy. USA Patent office # 7092087.

Burgess, S. C., Ross, N., and Davison, T. F., 1999. Host-encoded protein expressed on Marek's disease (MDV)-infected cells and antibody thereto. European patent office No. WO9955860 . Contains no work done at MSU

Software Copyrights

Nanduri, B., E.A. Allen, R.A. Elliott, **Burgess S.C.** 2006. DDF Analysis Tool.

Nanduri, B., E.A. Allen, **Burgess S.C.** 2006. Multiple Output Compiler.

Nanduri, B., E.A. Allen, **Burgess S.C.** 2006. Data Intersections Identifier.

Nanduri, B., E.A. Allen, R.A. Elliott, **Burgess S.C.** 2006. Xml 2 CSV tool.

Nanduri, B., E.A. Allen, J.J. Buza, **Burgess S.C.** 2006. Peptide distribution analysis tool.

Burgess S.C., McCarthy, F., Wang, N., Luthe, D.S., Bridges, S.M. 2005. AgBase (www.agbase.msstate.edu) a curated, open-source, Web-accessible resource for functional analysis of agricultural plant and animal gene products.

Nanduri, B., Lawrence, M. L., Vanguri, S., **Burgess S.C.** 2005. ProteinMapper Ver 1.0, Ver 2.1 and Version 3.

Nanduri, B., Lawrence, M. L., Ramkumar M., **Burgess S.C.** 2005. CysMapper.

Refereed Publications

* = Joint first author ** = Senior author.

B.Nanduri*, N.Wang*, M.L.Lawrence, S.M. Bridges** and **S.C. Burgess****. 2009. Gene model detection using proteome data. *Methods in Molecular Biology*. Humana Press. In press.

Bart H.J. van den Berg, Jay Konieczka, Fiona M. McCarthy** and **Shane C. Burgess****. 2009 *ArrayDer*: automated structural re-annotation pipeline for DNA microarrays. *BMC Bioinformatics*. In press.

J.R.Donaldson, B.Nanduri, S.M. Bridges, **S.C. Burgess***, and Mark L. Lawrence*. 2009. Comparative proteomic analysis of *Listeria monocytogenes* strains F2365 and EGD. *Applied and Environmental Microbiology*. In press.

Kunec*, D., B. Nanduri*, and **S. C. Burgess****. 2009. Experimental annotation of channel catfish virus genome using proteogenomic mapping. *Proteomics*. In press.

Shyamesh Kumar, Joram J. Buza and **Shane C. Burgess****. 2009. Genotype dependent tumor regression in Marek's Disease is mediated at the level of tumor immunity. *Cancer Microenvironment*. In press.

Burt*, D. W., W. Carrè, M. Fell, A. S. Law, P. B. Antin, J. Weber, C. J. Schmidt, **S. C. Burgess**, and F. M. McCarthy*. 2009. The Chicken Gene Nomenclature Committee Report. *BMC Genomics* In press.

B.Nanduri, L.A. Shack, **S.C. Burgess****, and M.L.Lawrence** . 2009. The transcriptional response of *Pasteurella multocida* to three classes of antibiotics. *BMC Genomics*. In press.

Srivastava SK, Daggolu PR, **Burgess SC**, Minerick AR. Dielectrophoretic Characterization of Erythrocytes: Positive ABO Blood Types. . Electrophoresis 2009;29(24):5033-46.

Kunec, D., S. van Haren, L. A. Hanson**, and **S. C. Burgess****. 2008. A Gateway® recombination herpesvirus cloning system with negative selection that produces vector-less progeny. Journal of Virological Methods. 155:82-6.

Dail, M. B., L. A. Shack, J. E. Chambers*, and **S. C. Burgess***. 2008. Global liver proteomics of rats exposed for five days to phenobarbital identifies changes associated with cancer and with cyp metabolism. Toxicological Sciences. Toxicol Sci 106:556-69.

Khijwania, S. K., C. K. Kim, J. P. Singh, and **S. C. Burgess**. 2008. Optimized fiber optic bioprobe with high spectral contrast exploiting laser-induced fluorescence for malignancy diagnosis. Appl Opt 47:6615-24.

Metzler, S. A., C. A. Pregonero, J. T. Butcher, **S. C. Burgess**, and J. N. Warnock. 2008. Cyclic Strain Regulates Pro-Inflammatory Protein Expression in Porcine Aortic Valve Endothelial Cells. Journal of Heart Valve Disease. 17:571-7; discussion 578.

Paul, D., S. Bridges, **S. C. Burgess**, Y. Dandass, and M. L. Lawrence. 2008. Genome sequence of the chemolithoautotrophic bacterium *Oligotropha carboxidovorans* OM5T. J Bacteriol 190:5531-2.

Buza, J. J., and **S. C. Burgess**. 2008. Different signaling pathways expressed by chicken naive CD4(+) T cells, CD4(+) lymphocytes activated with staphylococcal enterotoxin B, and those malignantly transformed by Marek's disease virus. J Proteome Res 7:2380-7.

Shack, L. A., J. J. Buza, and **S. C. Burgess**. 2008. The neoplastically transformed (CD30hi) Marek's disease lymphoma cell phenotype most closely resembles T-regulatory cells. Cancer Immunol Immunother 57:1253-62.

Nanduri, B., P. Shah, M. Ramkumar, E. A. Allen, E. Swaitlo, **S. C. Burgess***, and M. L. Lawrence*. 2008. Quantitative analysis of *Streptococcus Pneumoniae* TIGR4 response to in vitro iron restriction by 2-D LC ESI MS/MS. Proteomics 8, 2104-14.

Nanduri, B., M. L. Lawrence, D. S. Peddinti, and **S. C. Burgess**. 2008. Effects of Subminimum Inhibitory Concentrations of Antibiotics on the *Pasteurella multocida* Proteome: A Systems Approach. Comp Funct Genomics. Article ID 254836.

Cooksey*, A. M., A. Corzo*, M. D. Koter*, and **S. C. Burgess****. 2008. Quantitative serum proteomics of tryptophan-deficiency using bi-directional heavy oxygen labeling with a RuBisCO internal standard. The Open Proteomics Journal. 1: 27-39.

Buza*, T. J., F. M. McCarthy*, N. Wang, S. M. Bridges, and **S. C. Burgess**. 2008. Gene Ontology annotation quality analysis in model eukaryotes. Nucleic Acids Res 36:e12.

- Dandass, Y. S., **S. C. Burgess**, M. Lawrence, and S. M. Bridges. 2008. Accelerating string set matching in FPGA hardware for bioinformatics research. *BMC Bioinformatics* 9:197.
- Kunec, D., L. A. Hanson, S. van Haren, I. F. Nieuwenhuizen, and **S. C. Burgess**. 2008. An overlapping bacterial artificial chromosome system that generates vectorless progeny for channel catfish herpesvirus. *Journal of Virology* 82:3872-81.
- Peddinti*, D., B. Nanduri*, A. Kaya, J. M. Feugang, **S. C. Burgess***, and E. Memili*. 2008. Comprehensive proteomic analysis of bovine spermatozoa of varying fertility rates and identification of biomarkers associated with fertility. *BMC Systems Biology* 2:19.
- Scott, V. L., **S. C. Burgess**, L. A. Shack, N. N. Lockett, and K. S. Coats. 2008. Expression of CD134 and CXCR4 mRNA in Term Placentas from FIV-infected and Control Cats. *Veterinary Immunology and Immunopathology*. 23:90-96.
- van den Berg, B. H., T. Harris, F. M. McCarthy, S. J. Lamont, and S. C. Burgess. 2007. Non-electrophoretic differential detergent fractionation proteomics using frozen whole organs. *Rapid Communications in Mass Spectrometry* 21:3905-9.
- Cogburn*, L.A., T.E. Porter*, M. Duclos*, J., J. Simon*, **S.C. Burgess***, J.J. Zhu*, H.H. Cheng*, J.B. Dodgeson*, and J. Burnside*. 2007. Functional Genomics of the Chicken - A Model Organism. *Poultry Science*. 86 (10), 2059-94.
- Bridges, S. M., G. B. Magee, N. Wang, W. P. Williams, **S. C. Burgess****, and B. Nanduri**. 2007. ProtQuant: A Tool for the Label-Free Quantification of MudPIT Proteomics Data. *BMC Bioinformatics*. S24, 1-9.
- Sanders, W. S., S. M. Bridges, F. M. McCarthy, B. Nanduri, and **S. C. Burgess**. 2007. Prediction of peptides observable by mass spectrometry. *BMC Bioinformatics*. S24 1-9.
- Buza, T. J., F. M. McCarthy, and **S. C. Burgess** 2007. Experimental-confirmation and functional-annotation of predicted proteins in the chicken genome. *BMC Genomics* 8:425
- McCarthy*, F. M., A. M. Cooksey*, and **S. C. Burgess**. 2007. Sequential detergent extraction prior to mass spectrometry analysis. *Methods in Molecular Medicine: Proteomic analysis of membrane proteins*. Humana Press. 117 (1-4):278-87.
- Dail, M. B., **S. C. Burgess**, E. C. Meek, J. Wagner, J. Baravik, and J. E. Chambers. 2007. Spatial Distribution of CYP2B1/2 Messenger RNA within the Rat Liver Acinus following Exposure to the Inducers Phenobarbital and Dieldrin. *Toxicological Sciences*. 99 (1): 35-42.
- Buza, J. J. and **S.C. Burgess**. Modeling the proteome of a Marek's disease transformed cell line: a natural animal model for CD30 over-expressing lymphomas. *Proteomics*, 2007. 7:1316-26.

- Memilli, E., D. Peddiniti, L. A. Shack, B. Nanduri, F. M. McCarthy, H. Sagirkaya, and **S. C. Burgess****. 2007. Bovine germinal vesicle oocyte and cumulus cell proteomics. *Reproduction*. 133 (6):1107-1120.
- McCarthy, F. M., S. M. Bridges, and **S. C. Burgess****. 2007. GOing from Functional Genomics to Biological Significance. *Cytogenetic and Genome Research*. 117 (1-4):278-87.
- McCarthy, F. M., S. M. Bridges, N. Wang, G. B. Magee, W. P. Williams, D. S. Luthe, and **S. C. Burgess****. 2006. AgBase: a unified resource for functional genomics analysis in agriculture. *Nucleic Acids Research*. D599-603.
- Pharr, G. T., S. L. Branton, A. M. Cooksey, L. A. Hanson, **S. C. Burgess**, C. C. Bottoms, and S. D. Collier. 2006. The Recognition of a vIhA Protein from the F-Strain of *Mycoplasma gallisepticum* with Monoclonal Antibody 6F10. *International Journal of Poultry Science* 5:789-795.
- Burgess, S. C.**, T. S. Cummings, A. M. T. Steegh, L. A. Hanson, D. C. Sullivan, and R. L. Nolan. 2006. Distinguishing closely-related streptogramin-resistant *Enterococcus faecium*: SNPs in one specific 16S-23S rRNA intergenic region. *Journal of Animal and Veterinary Advances*. 5 (10), 855-862.
- Fiona M McCarthy, Nan Wang, G. Bryce Magee, Bindu Nanduri, Mark L. Lawrence, Evelyn Camon, David Hill, Mary E Dolan, W. Paul Williams, Dawn Luthe, Susan M Bridges and **Shane C Burgess****. 2006. AgBase: A Functional Genomics Resource for Agriculturally Important Species. *BMC Genomics*. 7(1):229
- Hamal, K. R., **S. C. Burgess**, I. Y. Pevzner, and G. F. Erf. 2006. Maternal Antibody Transfer from Dams to Their Egg-yolk, Egg-white and Chicks in Two Meat Lines of Chickens. *Poultry Science* 85:1364-72
- Corzo, A., M. T. Kidd, W. A. Dozier, 3rd, L. A. Shack, and **S. C. Burgess.**** 2006. Protein expression of pectoralis major muscle in chickens in response to dietary methionine status. *British Journal of Nutrition* **95**:703-8.
- Betancourt, A. M., **S. C. Burgess**, and R. L. Carr. 2006. Effect of Developmental Exposure to Chlorpyrifos on the Expression of Neurotrophin Growth Factors and Cell-Specific Markers in Neonatal Rat Brain. *Toxicological Sciences*. **92**:500 - 506.
- McCarthy, F. M., A. M. Cooksey, N. Wang, S. M. Bridges, G. T. Pharr, and **Burgess. S. C.** 2006. Whole Organ Proteomics and Proteogenomics Using the Model Avian Genome. *Proteomics* **6**:2759-71.
- E.A. Haygreen, P. Kaiser, **S.C. Burgess**, T.F. Davison. 2006. In ovo DNA immunisation followed by a recombinant fowlpox boost is fully protective to challenge with virulent IBDV. *Vaccine* **24**:4951-4961.

Warnock, J. N., **S. C. Burgess**, A. Shack, and A. P. Yoganathan. 2006. Differential immediate-early gene responses to elevated pressure in porcine aortic valve interstitial cells. *Journal of Heart Valve Disease* 15:34-41.

Bindu Nanduri, Mark L. Lawrence, Carolyn R. Boyle, Mahalingam Ramkumar, and **Shane C. Burgess****. 2006. Effects of sub-minimum inhibitory concentrations of antibiotics on the *Pasteurella multocida* proteome. *Journal of Proteome Research*. 5: 572-580.

Nanduri, B., M. L. Lawrence, S. Vanguri, and **S. C. Burgess****. 2005. Proteomic analysis using an unfinished bacterial genome: the effects of sub-minimum inhibitory concentrations of antibiotics on *Mannheimia haemolytica* virulence factor expression. *Proteomics* 5:4852-4863.

Scott, T. R., A. R. Messersmith, W. J. McCrary, J. L. Herlong, and **S. C. Burgess****. 2005. Hematopoietic prostaglandin D2 synthase in the chicken Harderian gland. *Vet Immunol Immunopathol* 108:295-306.

Burgess, S. C. 2005. ChickGO: Where to GO for Chicken Gene Ontology. *Poultry Genome Newsletter*: 3, 3.

McCarthy*, F. M., **S. C. Burgess ***, B.H.J. van den Berg, M.D. Koter and G. T. Pharr. 2005. Differential detergent fractionation for non-electrophoretic eukaryote cell proteomics. *Journal of Proteome Research*. 4 (2), 316-324.

van den Berg, B. H., E. J. H. Pingen, T. Harris, F. M. McCarthy, H. Zhou, S. Lamont, W. E. Holmes, and **S. C. Burgess****. 2005. Differential Detergent Fractionation and frozen whole organ proteomics. *Journal of the American Society for Mass Spectrometry*, 16 (5s), 69s

Corzo, A., M. Koter, M. T. Kidd, and **S. C. Burgess****. 2005. Assessment of Dietary Amino Acid Scarcity on Growth and Blood Plasma Proteome Status of Broiler Chickens. *Poultry Science*. 84 (3), 419-25

Hale, L. L., G. T. Pharr, **S. C. Burgess**, A. Corzo, and M. T. Kidd. 2004 Isoleucine needs of thirty- to forty-day-old female chickens: immunity. *Poultry Science* 83:1979-85.

Kumar, A., F.-Y. Yueh, J. P. Singh, and **S. C. Burgess****. 2004. Characterization of Malignant Tissue Cells Using laser Induced Breakdown Spectroscopy. *Applied Optics*. 43 (28), 5399-5403.

Weaver, C. C., **S. C. Burgess**, P. D. Nelson, M. Wilkinson, P. L. Ryan, C. A. Nail, K. A. Kelly-Quaglianab, M. L. May, R. K. Reeves, C. R. Boyle, and K. S. Coats. 2004. Placental immunopathology and pregnancy failure in the FIV -infected cat. *Placenta*, 26 (2-3):138-147.

Burgess, S. C., J. R. Young, B. J. G. Baaten, L. Hunt, L. N. J. Ross, M. S. Parcells, P. M. Kumar, L. F. Lee, and T. F. Davison. 2004. Marek's disease is a natural model for lymphomas over-expressing Hodgkin's disease antigen (CD30). *Proceedings of the National Academy of Sciences of the USA*. 101; 38, 13879-13884

Corzo, A., M. T. Kidd, and **S. C. Burgess**** . 2004. Whole-plasma MALDI-TOF proteomics for identification of biomarkers of nutritional status in the chicken. *Journal of Animal and Veterinary Advances* 3:522-526.

Corzo, A., M. T. Kidd, G. T. Pharr, and **S. C. Burgess**** . 2004. Initial mapping for the chicken blood plasma proteome. *International Journal of Poultry Science* 3:157-162.

Burgess, S. C. 2004. Proteomics in the chicken: tools for understanding immune responses to avian diseases. *Poultry Science* 83:552-73.

Burgess, S. C. 2004. The chicken in GATTACA land: pragmatic post-genomic biology in the chicken? *Proceedings of the National Poultry Breeders association.* 53:189-203.

Barrow, A. D., **S. C. Burgess**, K. Howes, and V. K. Nair. 2003. Monocytosis is associated with the onset of leukocyte and viral infiltration of the brain in chickens infected with the very virulent Marek's disease virus strain C12/130. *Avian Pathology* 32:183-91.

Barrow*, A. D., **S. C. Burgess***, S. J. Baigent, K. Howes, and V. K. Nair. 2003. Infection of macrophages by a lymphotropic herpesvirus: a new tropism for Marek's disease virus. *Journal of General Virology* 84:2635-45.

Levy, A. M., I. Davidson, **S. C. Burgess**, and E. Dan Heller. 2003. Major histocompatibility complex class I is downregulated in Marek's disease virus infected chicken embryo fibroblasts and corrected by chicken interferon. *Comparative Immunology Microbiology and Infectious Diseases* 26:189-98.

Levy*, A. M., **S. C. Burgess***, I. Davidson, G. Underwood, G. Leitner, and E. D. Heller. 2003. Interferon-containing supernatants increase Marek's disease herpesvirus genomes and gene transcription levels, but not virion replication in vitro. *Viral Immunology* 16:501-9.

Burgess, S. C., and T. F. Davison. 2002. Identification of the neoplastically transformed cells in Marek's disease herpesvirus-induced lymphomas: recognition by the monoclonal antibody AV37. *Journal of Virology* 76:7276-92.

Burgess, S. C., B. H. Basaran, and T. F. Davison. 2001. Resistance to Marek's disease herpesvirus-induced lymphoma is multiphasic and dependent on host genotype. *Veterinary Pathology* 38:129-42.

Burgess, S. C., and T. F. Davison. 1999. Counting absolute numbers of specific leukocyte subpopulations in avian whole blood using a single-step flow cytometric technique: comparison of two inbred lines of chickens. *Journal of Immunological Methods* 227:169-76.

Burgess, S. C., and T. F. Davison. 1999. A quantitative duplex PCR technique for measuring amounts of cell-associated Marek's disease virus: differences in two populations of lymphoma cells. *Journal of Virological Methods* 82:27-37.

Marek's disease virus tumours may be a result of latent virus escaping the immune response. **S.C. Burgess****, T.F. Davison. (1998): Trends in Avian Tumour Virology, Avian Pathology 27, S88.

Ross, N., G. O'Sullivan, C. Rothwell, G. Smith, **S. C. Burgess**, M. Rennie, L. F. Lee, and T. F. Davison. 1997. Marek's disease virus EcoRI-Q gene (meq) and a small RNA antisense to ICP4 are abundantly expressed in CD4+ cells and cells carrying a novel lymphoid marker, AV37, in Marek's disease lymphomas. Journal of General Virology 78:2191-8.

Submitted and in review

Yueh, F.-Y., H. Zheng, J. P. Singh, and **S. C. Burgess****. 2008. Identification of Tissue Samples Using Laser-Induced Breakdown Spectroscopy. Applied Optics Submitted.

N. Thanthridge-Don, F. Ahdul-Careem, L.A. Shack, **S.C Burgess***, S. Sharif*. 2008. A two-dimensional gell electrophoresis-based proteomic approach to profile dynamics of protein expression in chicken spleen in response to Marek's disease virus infection. J. Virology. Submitted.

Fiona M McCarthy, Timothy J Mahony, Mark S Parcels and **Shane C Burgess**. 2008. Understanding animal viruses using the Gene Ontology and AgBase. Trends in Microbiology. Invited and submitted.

Ranjit Kumar* , **Shane C Burgess**, Mark L Lawrence and Bindu Nanduri. 2008.TAAPP: Tiling array analysis and annotation pipeline for prokaryotes. Bioinformatics. Submitted.

S.C.Burgess, T.F. Davison, P.J. Sondermeijer and I. Tarpey. 2009. Vaccination against only the Hodgkin's disease antigen (CD30) decreases the rate of lymphomagenesis in the Marek's disease model. Vaccine. Submitted.

Refereed Book Chapters

Parcells, M. S., and S. C. Burgess. 2008. Immunological aspects of Marek's disease virus (MDV)-induced lymphoma progression: Immune Suppression and Modulation, p. 169-191. *In* H. E. Kaiser (ed.), Selected Aspects of Cancer Progression: Metastasis, Apoptosis and Immune Response. Springer, Dordrecht, The Netherlands.

Chan, D., S. M. Bridges, and **S. C. Burgess**. 2007. An Ensemble Method for Identifying Robust Features for Biomarker Identification. Refereed Book Chapter., p. 377-389. *In* H. Liu and H. Motoda (ed.), Computational methods of feature selection. Taylor & Francis, Boca Raton, USA.

Burgess, S. C. 2004. Marek's disease tumors. *In*: Marek' s disease: an evolving problem. T. F. Davison and K. Venugopal (ed.). Academic Press, London, UK.

Leach, R. A., and **S. C. Burgess**. 2003. Neuroimmune Hypothesis, p. 339-362. In: R. A. Leach (ed.), The chiropractic theories : a textbook of scientific research. Fourth Edition., 4th ed. Lippincott Williams & Wilkins, Philadelphia.

Burgess, S. C., and K. N. Venugopal. 2002. Chapter VII: Anti-tumor Immune Responses after Infection with the Marek's Disease and Avian Leukosis Oncogenic Viruses of Poultry, p. 236-291. In: T. Mathew (ed.), Advances in Medical & Veterinary Virology, Immunology and Epidemiology. Modern Concepts of Immunology in Veterinary medicine: Poultry Immunology, vol. III. Thajema Publishing, West Orange, NJ, USA.

Refereed Publications in Conference Proceedings * = Joint first authorship; ** = Senior author.

Kunec D, Shack A, Haren Sv, McCarthy F, **Burgess SC**. Demonstration of a genotype-dependent chicken CD30-Marek's disease virus Meq positive amplification loop involving NF- κ B. 8th International Marek's Disease Symposium. July6 – 10 2008. Townsville, Queensland , Australia

Kumar S, Buza JJ, **Burgess SC** Genetic susceptibility to MD lymphomagenesis is associated with immune polarization. 8th International Marek's Disease Symposium. July6 – 10 2008. Townsville, Queensland , Australia.

Shack LA, Buza1 JJ, **Burgess SC** The neoplastically-transformed (CD30hi) Marek's disease lymphoma cell phenotype most closely resembles T-regulatory cells. 8th International Marek's Disease Symposium. July6 – 10 2008. Townsville, Queensland , Australia

Nan Wang, Changhe Yuan, **Shane Burgess**, Bindu Nanduri, Mark Lawrence, Susan Bridges 2008. Integrating Evidence for Evaluation of Potential Novel Protein-coding Genes Using Bayesian Networks. BIOCOMP'08 - The 2008 International Conference on Bioinformatics & Computational Biology. Monte Carlo Resort, Las Vegas, Nevada, USA (July 14-17, 2008)

William S. Sanders, Nan Wang, Susan M. Bridges, **Shane C. Burgess** 2008. Proteomics based structural genome annotation in chicken. International meeting: "Delivering Value from Avian Genomes", Mississippi State University, Starkville, Mississippi, United States, May 19-20, 2008

Bart H.J. van den Berg, Susan J. Lamont, **Shane C. Burgess** 2008. Functional genomics of key genetic mechanisms regulating resistance to Salmonella enteritidis in chicken. International meeting: "Delivering Value from Avian Genomes", Mississippi State University, Starkville, Mississippi, United States, May 19-20, 2008

Dusan Kunec, Allen Shack, Sandra van Haren, Fiona McCarthy and **Shane C. Burgess** 2008. Delivering value from the chicken and Marek disease herpesvirus genomes:a genotype-dependent chicken. CD30-Marek's Disease Virus oncoprotein Meq positive amplification loop involving NF-kappaB. International meeting: "Delivering Value from Avian Genomes", Mississippi State University, Starkville, Mississippi, United States, May 19-20, 2008

Bindu Nanduri , Changhe Yuan, Nan Wang , Susan M. Bridges Mark L. Lawrence and **Shane C. Burgess** 2008. From the genome sequence to systems analysis; a fowl cholera pathogen example. International meeting: "Delivering Value from Avian Genomes", Mississippi State University, Starkville, Mississippi, United States, May 19-20, 2008

S. Kumar, J.J. Buza and **Shane Burgess** 2008. Non MHC associated Marek's Disease lymphomagenesis is mediated at the level of tumor immunity. International meeting: "Delivering Value from Avian Genomes", Mississippi State University, Starkville, Mississippi, United States, May 19-20, 2008

A.M. Cooksey, M.D. Koter, A. Corzo and **S.C. Burgess** 2008. Quantitative serum proteomics based systems-biology modeling of a tryptophan depleted diet. International meeting: "Delivering Value from Avian Genomes", Mississippi State University, Starkville, Mississippi, United States, May 19-20, 2008

S.S. Keshavamurthy, K. Leonard, **S.C. Burgess**, A.R. Minerick 2008. Direct Current Dielectrophoretic Characterization of Erythrocytes:Positive ABO blood types. Nano Science and Technology Institute Annual Conference, Boston, Massachusetts, U.S.A. June 1-5, 2008.

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Chan, D., Bridges, S. M.**, Corzo, A., Koter, M. D. and **Burgess, S. C.**** 2005. Machine Learning for Classification of Nutritional Status from Direct MALDI-TOF Proteomics Data. Keystone Symposium on Systems Biology, Keystone, Colorado, April 8-13.

Wall, J. R. Whitman, and **S. C. Burgess****. 2005. The effects of removing the interferon response elements from the Marek's disease virus pp38 gene promoter. Proceedings of the Mississippi Academy of Sciences sixty-ninth annual meeting.

Oppenheimer, S.F., J. Chambers and **S.C. Burgess***. 2004. A model for parathion desulfuration in a liver sinusoid. The 24th Annual Southeastern-Atlantic Regional Conference on Differential Equations, Chattanooga, TN. October 22-23.

Betancourt, A. M., **S. C. Burgess**, and R. L. P. T. Carr. 2004. Real-time quantitative RT-PCR for NGF gene expression in the hippocampus after repeated exposure to chlorpyrifos and methyl parathion. South Central Chapter of Society of Toxicology.

Collier, S. D., S. L. Branton, J. D. Evans, G. T. Pharr, and **S. C. Burgess***. 2003. ARS Immunology Research Workshop: Mycoplasma gallisepticum: Competitive Exclusion or Immune Based. USDA Beltsville Agricultural Research Center, MA, USA.

Corzo, A., M. T. Kidd, and **S. C. Burgess****. 2004. Dietary lysine need of broiler chicks and implementation of proteomics on its nutritional mode of action. International Poultry Scientific forum, International Poultry Exposition 2004, Atlanta,GA,.

Dail, M. B., **S. C. Burgess**, and J. E. Chambers. 2004. Spatial determination of cytochrome P450 enzyme activity. Annual Meeting South Central Chapter of the Society of Toxicology.

Hale, L., G. T. Pharr, **S. C. Burgess**, A. Corzo, and M. T. Kidd. 2004. Isoleucine needs of female broilers:Immunity. International Poultry Scientific forum, International Poultry Exposition 2004, Atlanta,GA.

Kunec, D., L. A. Hanson, and **S. C. Burgess****. 2004. Systems biology study of complex pathogen-host interaction: from components to system. Annual Meeting of the South Central Branch of the American Society for Microbiology.

Nanduri, B., M. L. Lawrence, and **S. C. Burgess****. 2004. Sub-MIC concentrations of antibiotics decrease mannheimia haemolytica leukotoxin expression. Annual Meeting of the South Central Branch of the American Society for Microbiology.

Thomas, G., and **S. C. Burgess****. 2004. Presented at the 2004 American Institute of Chemical Engineers (AIChE) Annual Meeting. T2: Bioinformatics and Functional Genomics, Austin, TX, November 7-12.

van den Berg, B. H. J., J. J. Buza, and **S. C. Burgess****. 2004. Proteomic approach to identifying novel Hodgkin's disease antigen signaling proteins. Annual Meeting of the South Central Branch of the American Society for Microbiology.

Koter, M. D.,* T. Pechan*, Corzo, A., Kidd, M.T. and **Burgess, S. C.**** 2004. Developing mass spectrometric quantification of complex protein mixtures using O18 labeling. Annual Meeting of the South Central Branch of the American Society for Microbiology.

Betancourt, A. M., **S. C. Burgess**, and R. L. P. T. Carr. 2004. Real-time quantitative RT-PCR for NGF gene expression in the hippocampus after repeated exposure to chlorpyrifos and methyl parathion. South Central Chapter of Society of Toxicology.

Chambers, J. E., J. G. Baravick, **S. C. Burgess**, E. C. Meek, E. B. Shows, and S. F. Oppenheimer. 2004. Spatial determination of cytochrome P450-mediated phosphorothionate bioactivation in the rat liver acinus. International Society for the Study of Xenobiotics, Vancouver, Canada.

Nanduri, B., M. L. Lawrence, and **S. C. Burgess****. 2004. Determination of Sub-MIC Effects of Antibiotics on *Pasteurella multocida* Protein Expression Using Cleavable Isotope Coded Affinity Tag Reagents. American Society for Microbiology.

Pippen, A., R. Witwam, and **S. C. Burgess****. 2004. Towards Identifying Proteins Associated With the Marek's Disease Virus PP38 Gene: A Proteomics Approach. Proceedings of the Mississippi Academy of Sciences sixty-eighth annual meeting.

Ziegeler, A. M., R. Whitwam, and **S. C. Burgess****. 2004. Constructs for investigating the effect of interferon response elements on the expression of Marek's disease virus pp38 gene. Proceedings of the Mississippi Academy of Sciences sixty-eighth annual meeting.

Burgess, S. C. 2003. Proteomics for investigating the molecular basis of normal and pathological avian physiology. American Association of Avian Pathologists, WVPA/AAAP/AVMA Meeting.

Steegh, A. M. T., and **S. C. Burgess****. 2003. A high-throughput molecular method to quantify relatedness of human and chicken *Enterococcus faecium* isolates. American Association of Avian Pathologists, WVPA/AAAP/AVMA.

S.C. Burgess , T.F. Davison. 1998. Determining absolute numbers of specific peripheral blood leukocyte subpopulations after Marek's disease virus (MDV) infection and measuring MDV load in two subpopulations of tumour cells. 2nd International Workshop on Molecular Pathogenesis of MDV. Slovak Republic.

S.C. Burgess, T.F. Davison. 1998. Determining absolute numbers of specific peripheral blood leukocyte subpopulations after Marek's disease virus (MDV) infection and measuring MDV load in two subpopulations of tumour cells. 2nd International Workshop on Molecular Pathogenesis of MDV. Slovak Republic.

SC Burgess, B.J.G. Baaten, J.R. Young & T.F. Davison. 2000. A monoclonal antibody that recognises the chicken homologue of CD30: a tumour antigen in Marek's disease. Avian

Immunology Research Group, international symposium. Cornell University, Ithaca, New York State, USA

External Invited Lectures

Shane Burgess Update on AgBase and Marek's disease transformation, Plant and Animal Genome XVII Conference January 10-14, 2009. San Diego, California.

Shane Burgess, Susan Bridges and Fiona McCarthy. Gene Ontology Annotations, Tools and Educational Resources for Chicken and Cow Research. USDA CSREES Animal Genome PD Meeting, January 8, 2009. San Diego, California.

Shane Burgess. 2008. Microbes, Machines, Microchips and Meaning, , Dpt. Vet Microbiology and Preventative Medicine, at the College of Veterinary Medicine, Iowa State University Dec 15, 2008.

Burgess, SC. 2008. GOing from omics datasets to meaningful data. October 30. North Carolina State University College of Veterinary Medicine.

Burgess, SC. 2008. Cellulosic Biofuels Session and Panel Chair University and Industry Consortium Fall meeting, Research Triangle Park, NC. October 29.

McCarthy* F.M., **Burgess* S.C.** and Bridges* S.M. 2008. Keynote address. 2008 "GOing from "-omics" data to biological knowledge in livestock." International Society for Animal Genetics (ISAG) from July 20-24, Amsterdam, Netherlands.

Burgess, SC. 2008. Keynote address. Genetic resistance and host genomics. 8th International Marek's Disease Symposium. July6 – 10 2008. Townsville, Queensland , Australia

Burgess, SC. 2008. Keynote address. Deriving biological meaning from patchy proteomics. 3rd International Symposium on Animal Functional Genomics. April 7-9, Edinburgh, UK

Burgess, S. C. 2008. Functional genomic analysis of Marek's disease lymphomagenesis directly ex-vivo. USDA Animal Genome project director workshop January 11, 2008. San Diego, California.

Shane Burgess, Fiona McCarthy, Susan Bridges. Gene Ontology for Sheep. Sheep Genome Workshop, Plant and Animal Genome XVI Conference, January 12-16, 2008. San Diego, California.

Shane Burgess, Fiona McCarthy, Bindu Nanduri, Susan Bridges. Update on Facilitating Systems Biology in the Chicken. Avian Genomes Workshop, Plant and Animal Genome XVI Conference, January 12-16, 2008. San Diego, California.

Susan Bridges, Nan Wang, Teresia Buza, Fiona McCarthy*, **Shane Burgess***. 2007. Experimental structural annotation of the chicken genome using proteogenomic mapping.

International chick genome meeting: the chick as a model organism: genes, development and function 11-14 April, Barcelona, Spain.

Shane Burgess*, Susan Bridges* Fiona McCarthy*, Nan Wang. 2007. ChickGO @ AgBase: AN UPDATE AND PRIMER. 2007. International Chick Genome Meeting: the chick as a model organism: genes, development and function 11-14 April, Barcelona, Spain.

Burgess, S. C. 2007. The mechanics of Marek's disease lymphoma progression and regression. USDA Animal Protection project director workshop December 5, Chicago, IL.

Burgess, S. C. 2007. Functional genomic analysis of Marek's disease lymphomagenesis directly ex-vivo. USDA Animal Protection project director workshop December 5, Chicago, IL.

M.L. Lawrence*, **S. C. Burgess***, B. Nanduri and S. M. Bridges*. Experimental annotation of bovine respiratory disease pathogen genomes by protegenomic mapping. Microbial Genomes Workshop, Plant and Animal Genome XV Conference, January 13-18, 2007. San Diego, California.

Bridges, S. M., R. Kelly, G. B. McGee, N. Wang, **S. C. Burgess**, D. S. Luthe, and P. Williams. 2007. Microbial Genomes Workshop, Plant and Animal Genome XV Conference, January 13-18, 2007. San Diego, California.

F. M. McCarthy*, **S. C. Burgess***, N. Wang* and S. M. Bridges*. Plant-Associated Microbe Gene Ontology (PAMGO) / Institute of Digital Biology - AgBase. 2007. Joint presentation from Cornell University and MSU IDB. Avian Genomes Workshop, Plant and Animal Genome XV Conference, January 13-18, 2007. San Diego, California.

S. C. Burgess*, F. M. McCarthy*, N. Wang*,and S. M. Bridges*. Hypothesis-driven data modeling from GO using the AgBase tools. 2007. Avian Genomes Workshop, Plant and Animal Genome XV Conference, January 13-18, 2007. San Diego, California.

S. C. Burgess*, F. M. McCarthy*, N. Wang*,and S. M. Bridges*. AgBase: Facilitating Analysis of Chicken Functional Genomics Datasets. 2007. Avian Genomes Workshop, Plant and Animal Genome XV Conference, January 13-18, 2007. San Diego, California.

F. M. McCarthy*, **S. C. Burgess***, N. Wang*,and S. M. Bridges*. Cattle/Sheep Genomes Workshop "AgBase: Enabling Functional Genomics Analysis in Ruminants". 2007. Avian Genomes Workshop, Plant and Animal Genome XV Conference, January 13-18, 2007. San Diego, California.

McCarthy* F.M., Wang* N., Bridges* S.M. and **Burgess* S.C.** "Welcome To GO: A GO User's Retrospective. 2007. Avian Genomes Workshop, Plant and Animal Genome XV Conference, January 13-18, 2007. San Diego, California.

F. M. McCarthy, **Burgess***, **S. C.**, N. Wang, B. Nanduri, and S. M. Bridges. 2006. AgBase: Facilitating Functional Genomics in Agricultural Species. Conference of Research Workers in Animal Diseases, December 3-5, Chicago, IL.

McCarthy, F. M., N. Wang, B. Nanduri, S. M. Bridges, and **S. C. Burgess**. 2006. Proteomics and Gene Ontology: Analyzing Function in a Post-Genomic World. 11 October 2006. Queensland Government, Department of Primary Industries and Fisheries. Australia.

McCarthy* F.M., Bridges* S.M. and **Burgess S.C.** (2006). Increasing GO annotation through community involvement. International Gene Ontology Users Meeting. 10 September, 2006. Seattle, Washington, USA.

Bridges* S.M., McCarthy* F.M., Wang N., Magee G.B., Nanduri B. and **Burgess S.C.** (2006). The AgBase GO Annotation Tools. International Gene Ontology Users Meeting. 10 September, 2006. Seattle, Washington, USA..

Buza, J. J., L. A. Shack, and **S. C. Burgess****. 2006. Modeling the functional genome of neoplastic transformation in Marek's disease. 4th International Workshop on the Molecular Pathogenesis of Marek's Disease Virus University of Delaware. August 4-8, 2006.

Bridges, S. M., N. Wang*, F. M. McCarthy*, and **S. C. Burgess**. 2006. The Gene Ontology and the chicken genome: attributes in search of a product. International Workshop on Chicken genomics & development. May 7-10, 2006. Cold Spring Harbor Laboratories, NY.

S. C. Burgess*/** McCarthy*, F. M., N. Wang*, T. J. Buza, D. Peddinti, and S. M. Bridges**. 2006. Where to GO for chicken gene ontology. Avian Genomes Workshop, Plant and Animal Genome XIV Conference, January 14-18, 2006. San Diego, California.

McCarthy*, F. M., N. Wang*, T. J. Buza, D. Peddinti, S. M. Bridges**, and **S. C. Burgess****. 2006. AgBase and the Ruminant Genomes: GOing towards Greener Pastures. Cattle/Sheep Workshop, Plant and Animal Genome XIV Conference, January 14-18, 2006. San Diego, California.

Bridges, S. M., F. M. McCarthy, M. L. Lawrence, B. Nanduri, D. Kunec, A. M. Cooksey, A. Corzo, M. D. Koter, J. J. Buza, B. H. J. van den Berg, N. Wang, and **S. C. Burgess***. 2006. High throughput non-electrophoretic proteomics and Gene Ontology for modeling biological function in chicken, cow and channel catfish research. Proteomics Workshop, Plant and Animal Genome XIV Conference, January 14-18, 2006. San Diego, California.

Burgess, S. C. 2005. Functional genomic analysis of Marek's disease lymphomagenesis directly ex-vivo. One of 10 project directors nationwide selected for oral presentation at the USDA Animal Protection project director workshop December 7, St Louis, Missouri.

Burgess*, S. C., F. M. McCarthy, N. Wang, B. Nanduri, D. S. Luthe, and S. M. Bridges. 2005. AgBase: Gene Ontology annotation databases for agricultural genome products. Conference of Research Workers in Animal Diseases, St. Louis, Missouri.

Wang*, N., F. M. McCarthy*, **S. C. Burgess****, and S. M. Bridges**. 2005. AgBase GO Toolkit: A Gene Ontology Annotation Toolkit for Large Scale Protein Datasets. 1st International Biocurator Meeting, Pacific Grove, CA. December 8-11, 2005.

McCarthy*, F. M., N. Wang*, S. M. Bridges**, and **S. C. Burgess****. 2005. AgBase: GOing down to the farm for functional annotation. 1st International Biocurator Meeting, Pacific Grove, CA. December 8-11, 2005.

Bridges, S.M, F. M. McCarthy, D.S. Luthe., N. Wang, B. Nanduri and **S. C. Burgess****. Invited. "AgBase: Targeted gene ontology annotation databases for agriculture." Fifth Annual Gene Ontology users meeting. Bergen, Norway. 14 - 15 Sept 2005

McCarthy, F. M.*, N. Wang*, and S.M. Bridges**, **S. C. Burgess****. Invited. "ChickGO takes flight." Fifth Annual Gene Ontology users meeting. Bergen, Norway. 14 - 15 Sept 2005

McCarthy F.M. and **Burgess S.C.** 2005. Invited. "GOing with chickens, cows and catfish: genome biocuration in important livestock". 1st International Biocurator Meeting, Asilomar, CA, December 8-11.

Burgess S.C. 2005. Invited. Proteomics applied to disease in poultry. European Poultry Genetics Symposium 2005. Dubrovnik, Croatia, October 6-8.

Burgess S.C. 2005. Invited. "Mechanistic evidence for beneficial effects of "sub-therapeutic antibiotics". Scientific Symposium on the Role of Mass Spectrometry in Proteomics Research and Biomarker Discovery. Toronto, Canada, May 19.

Burgess S.C. 2005. Invited. "Mississippi MuDPIT: proteomics in species with imperfect genome sequences. Scientific Symposium on the Role of Mass Spectrometry in Proteomics Research and Biomarker Discovery. Montreal, Canada, May 18.

Burgess SC. 2005. Invited. Functional genomics of animals, plants and micro-organisms. Oak Ridge National Laboratory, TN. March 4.

Fiona M. McCarthy, **Amanda M.Cooksey**, G. Todd Pharr, and Shane C.Burgess. Invited. 2005. CHICKaGO: from Mississippi to Maine. The Jackson Laboratory is the world's largest mammalian genetic research facility. Bar Harbor, Maine, March 8.

Burgess S.C. 2005. Invited. "Livestock proteomics: challenges of GOing from MuDPITs" Gordon Conference on Quantitative Genetics and Genomics, Ventura, CA. February 20-25, 2005. Note: Gordon Conferences are also attended by invitation only and are strictly limited to 150 attendees from around the world

Cummings, T., Shack, A., and **Burgess, S.C.** 2005 Invited. Clinical, pathological and proteomic identification of the etiology of broiler breast meat condemnation. Mississippi Veterinary Medical Association annual winter meeting. February 18.

McCarthy, F. M., A. M. Cooksey, G. T. Pharr, and Burgess, S. C. **. 2004. Invited. GO Chicken: From MudPIT to Swamp. Fourth Annual International Gene Ontology users meeting, Chicago, IL, USA.

Thomas, G. and **Burgess S.C.** 2004. Invited. “Hydrogel Technology for Microfluidic Analysis in the Avian Cancer Model.” American Institute of Chemical Engineers (AIChE) Annual Meeting. T2: Bioinformatics and Functional Genomics, American Institute of Chemical Engineers Austin, TX, USA.

Burgess S.C. MSU., Hans H. Cheng USDA, ARS, Larry Cogburn U. of Delaware, Hyun S. Lillehoj USDA, ARS. 2004. Invited. “Case Study 1 - Poultry Long-Term Challenges In Genomics”. Policy forum for USDA research in the future. Poultry: Long-Term Challenges in Making Use of Genome Sequence Information through Functional Genomics. 22-23 September,

Burgess S.C. 2004: Keynote speaker. “Livestock Proteomics” Thermo Electron Corporation Proteomics Seminar, University of Arkansas.

Burgess S.C. 2004: Invited. “Poultry proteomics.” Texas A & M University.

Burgess S.C. 2004: Invited. “The chicken in GATTACA land: pragmatic post-genomic biology in the chicken? Poultry Breeders Roundtable. St. Louis, MO, USA.

Burgess S.C. 2004: Invited. “Proteomics”. Iowa State University, Ames, Iowa. Nutritional Sciences Council Lecture 190, Burroughs Lectureship: Modern Views in Nutrition.

Burgess S.C. 2004. Invited. “Chicken Genome: Is It Really Worth Knowing About?” Mississippi Veterinary Medical Association winter meeting.

Burgess S.C. 2004 Invited. “Proteomics for MD lymphomagenesis”. University of California at Davis, UCD Cancer Center Symposium on Functional Genomics of Marek’s Disease Herpesvirus.

Burgess S.C. 2003: Invited. “Livestock proteomics at Mississippi State University” USDA ARS Beltsville.

Burgess S.C. 2003: Invited. “Functional Genomics After Transcriptomics: Proteomics and Beyond.” International Chicken Genome Symposium: Impact and applications. Atlanta, GA, USA.

Burgess S.C. 2003. Invited. “Marek's disease, a unique natural animal model for CD30 over-expressing lymphomas” University of Delaware College of Agriculture and Natural Resources, Dept. of Animal and Food Sciences and Delaware Biotechnology Institute, Newark, DE, USA.

Burgess S.C. 2003: Keynote Speaker. “Proteomics in the Chicken: Tools for Understanding Immune Responses to Avian Diseases.” Ancillary Scientist Symposium, 92nd Poultry Science Association Meeting Madison, WI, USA.

Burgess S.C. 2003. Invited. “Proteomics in the Chicken”. Inaugural International Chicken Genome Workshop, Hinxton Genome Campus (Sanger Sequencing Center), Cambridge, UK. Closed international meeting by invitation only, 15 speakers, 50 attendees from industry, NIH, EMBL, USDA, MAFF and organizations of other countries. Meeting review in Science: Burt, D. and O. Pourquie (2003). "Genetics. Chicken genome--science nuggets to come soon." Science 300(5626): 1669.

Burgess S.C. 2003: Invited. “Proteomics research at CVM MSU”. Mississippi Veterinary Medical Association winter meeting..

Burgess S.C. 2002: Invited. “Molecular Differential Diagnosis of Avian Oncogenic Viruses”. United States-Israel Binational Agricultural Research and Development Fund, Workshop on Molecular Pathogenesis of Marek’s disease and Avian Immunology. Limassol, Cyprus.

S.C. Burgess and J. Kaufman. 2001: Invited. Evolution, the chicken, it’s pathogens and future vaccines. Private international meeting for Lohmann Animal Health: Worldwide Technical meeting No. 3 Future of vaccine design. Athens, GA, USA. January.

S.C. Burgess & TF Davison. 2000: Invited. Marek's Disease: A model system to protect against herpesvirus-induced lymphomas by vaccinating against a host-encoded antigen. 1st International symposium: "The discovery of new veterinary medicines". Pfizer Global Research and Development, UK.

Burgess S.C. 2000: Invited. Immunobiology and novel vaccines: Understanding a complicated, integrated, system and applying this to animal health. Invited speaker, Lohmann Animal Health, European Technical meeting, Germany.

S. C. Burgess. 2000. Identification and vaccinal targeting of the neoplastically-transformed cells in Marek's disease lymphomas. Invited speaker for institute seminar: Institut fur Molekularbiologie, Friedrich-Loeffler-Institute, Germany.

Burgess S.C. 2000: Invited. Immunobiology and Novel Vaccines: Understanding a complicated, integrated, system and applying this to animal health. Poultry Health Course. IAH Compton.

Burgess S.C. 1999: Invited. Immunogenetics and Immunobiology: Understanding a complicated, integrated, system and taking advantage of genetic diversity. Invited speaker. “Immunogenetics and Disease Resistance” held at Cobb Vantress Breeding Company, Siloam Springs, AK, USA 4-7 August

Invited Attendee and Contributor

January 2008-present. USDA Bioinformatics working group. By invitation group to plan the future of bioinformatics and computational biology for USDA (one of four outside of USDA).

2 February, 2008. The future of Animal Genome Bioinformatics and USDA's commitment and National Academies Meeting planning meeting. Advisory committee conference call. One of four University members.

11-13 June, 2007. Stowers Institute for Medical Research. Invitation only meeting to build a road map for a competitively funded federated worldwide network of bioinformatics resources for avian research in agriculture, biomedicine and other science. Organizations represented: MSU, Stowers Institute for Medical Research, European Molecular Biology Laboratories (EMBL), National Institutes for Health National Center for Biotechnology information, U. Arizona (Medical School), Human Genome Organisation Human Gene Nomenclature Committee, The Jackson Laboratories Mouse Genome Institute, Roslin Institute, Wellcome Trust Sanger Institute, Washington University School of Medicine.

5-9 February, 2007. RIKEN Research Institute, Kobe Japan. Invitation only meeting to discuss the future of avian bioinformatics worldwide. Organizations represented: MSU, RIKEN, U. Delaware, U. Arizona (Medical School), Stowers Institute for Medical Research

January 6-8, 2007. GO Consortium Meeting, 2007. Hinxton Genome Campus (Sanger Sequencing Center), Cambridge, UK.

10- 11 July, 2006. GO Annotation Standards meeting. Stanford University, Stanford, CA
Closed international meeting by invitation only for GO Consortium members only.

15-16 November, 2005: 2005 GO Content Meeting. The Institute for Genomic Research (TIGR) in Rockville, MD. Closed international meeting by invitation only, 20 attendees from NIH, EMBL, CSHL and first tier universities such as Cornell and UC Berkley.

30 April-2 May 2004: Second International Chicken Genome Workshop, Stowers Institute for Medical Research, Kansas City, MO, USA. Closed international meeting by invitation only, 15 speakers, 50 attendees from industry, NIH, EMBL, USDA, MAFF and organizations of other countries.

March 10-11, 2003. Inaugural International Chicken Genome Workshop, Hinxton Genome Campus (Sanger Sequencing Center), Cambridge, UK. Closed international meeting by invitation only, 15 speakers, 50 attendees from industry, NIH, EMBL, USDA, MAFF and organizations of other countries. Meeting review in Science: Burt, D. and O. Pourquie (2003). "Genetics. Chicken genome--science nuggets to come soon." Science 300(5626): 1669.

Meetings Steering committees

August 5 - 8, 2006. Meeting co-organizer and member of the international steering committee 4th International Workshop on the Molecular Pathogenesis of Marek's Disease will be held at the Clayton Conference Center at the University of Delaware in Newark, DE.

July 2005: International steering committee for 4th International Workshop on the Molecular Pathogenesis of Marek's Disease. August 5 - August 8, 2006.

2002-present: NIH planning grant for a National Program of Excellence in Biomedical Computing (NPEBC) targeting computational simulation in environmental health sciences. NIH P20 RR 017661.

Competitive Training

2002. Cold Spring Harbor Laboratories Inaugural Proteomics Practical Laboratory Course, Cold Spring Harbor Laboratories One of only four faculty level scientists selected from a short-list 150 applicants worldwide.

Reviewer

Grant agencies

Binational Agricultural Research and Development fund; Ad Hoc.

Israel Ministry of Science and Technology

National Institutes of Health; Panel member. Ad Hoc.

Biotechnology and Biological Sciences Research Council. Ad Hoc.

United States Department of Agriculture. Ad Hoc and Panel member.

Bio-industries Research Partnerships Programs/Programmes de partenariats de recherche NSERC/CRSNG. Ad Hoc.

National Science foundation. EPSCoR program Reverse Site Visit Research Infrastructure Improvement (RII) projects and ad hoc for other panels

Journals/Books

Poultry Science

Avian Pathology

Journal of Virology

Journal of General Virology

Veterinary Immunology

Immunity

Viral immunology

BMC Bioinformatics

BMC Genomics

Proteomics

Journal of Proteomics

Cytogenetic and Genome Research

Clinical and Experimental Immunology

Virus Research

BMC Bioinformatics

Avian Immunology, Academic Press/Elsevier T F Davison Ed

Translational Oncogenomics

Theoretical Biology and Medical Modelling
Journal of Virological Methods
Plos Pathogens

Editorial

2008-09. Special issue guest editor: *BMC Genomics*.

Since July 2008 Editorial Board Member, *The Open Bioinformatics Journal*

Since Jan 2006 Associate Editor *Cancer Letters*.

Since July 2005: Associate Editor for Immunology, Health and Disease, *Poultry Science*.

Since July 2005: Editorial Board Member, *The Open Proteomic journal*.

B. FUNDING

\$128,844 Burgess SC (PI), Kunec, D (Co-PI). Construction of avian recombinant viruses for vaccines. Commercial funding: Merial Inc. Duration 2009.

\$13,500 Burgess SC (PI). Travel Grant for PI, two students and one RA to all attend and speak at the 8th International Marek's Disease Meeting, Townsville, Australia. Funding Agency: USDA. Duration: 5/1/2008 – 8/30/2008.

\$55,000 Ethicon EndoSurgery Incorporated. The effect of electrocautery and harmonic energy on gene expression factors during an early stage of wound healing. Duration: 2008.

\$2,000 Burgess SC (PI). Undergraduate stipend for Bioinformatics. Funding Agency: NSF. Duration: 8/15/2008 – 4/30/2009

\$500,000. **Burgess, S.C. (PI)**, Peterson. D. (Co-PI), Peng, Z. (Co-PI), Reddy, R. (Co-PI), Thaxton P.R. (Co-PI), Wilkinson, J. (Co-PI). Increasing US cotton competitiveness through Genomics. Funding Agency: USDA ARS. Submission date: 4/1/2008. Duration: 2009-2010.

\$500,000 MS BIO (Mississippi Biotechnology Association) board of Directors, Senate Financial Services Appropriations bill. Duration: 2008-2009.

\$86,301 Bridges S.M. (PI), Nanduri B (PI), Burgess S.C. (PI). Proteomic Investigation of 2-ADNT Effects on Gene Networks in Northern Bobwhite Quail (*Colinus virginianus*). Funding Agency: Dept. of Defense. Duration: 7/1/2008 – 6/30/2009

- \$304,742 Warnock, J. (PI), **Burgess, S.C.** (Co-PI). Elevated cytosolic pressure, osteogenic de-differentiation and the aortic heart valve. Funding Agency: American Heart Association. Submission date: 5/25/2007. Duration: 07/01/08-06/30/12.
- \$791,721 **Burgess, S.C** (PI). Genomics for Southern Crop Stress and Disease, MS. Funding Agency: USDA. Submission date: 1/22/2008. Duration: 07/01/08-06/30/09.
- \$ 1,416,681 **Burgess, S.C.**(PI), Bridges S.M. (PI), F.M.McCarthy (Co-PI) Grant Title: Experimental annotation of the chicken genome. Funding Agency: NIH. Submission date: 5/25/2007. Duration: 2008-2012.
- \$110,000 M.L. Lawrence, J.A. Ainsworth (Co-Director), **S.C. Burgess** (Co-Director). Summer Research for Veterinary Students. Funding Agency: Merck-Merial Animal Health Grants Program 2007. Submission date: 10/30/2007. Duration: 2006-2011.
- \$463,118. **Burgess, S.C. (PI)**, Peterson. D. (Co-PI), Peng, Z. (Co-PI), Reddy, R. (Co-PI), Thaxton P.R. (Co-PI), Wilkinson, J. (Co-PI). Increasing US cotton competitiveness through Genomics. Funding Agency: USDA ARS. Submission date: 4/1/2007. Duration: 2008-2009.
- \$254,380 N, Phillipov (PI), **S.C. Burgess** (Co-PI), J. E. Chambers (Co-PI), G.T. Pharr (Co-PI), P.L. Ryan (Co-PI) MRI . Acquisition of a Laser Microdissection Instrument. Submission date: 1/22/2007. Duration: 2007.
- \$300,000 Kotler, M. (PI), Hanson, L. (Co-PI), **Burgess, S.C** (Co-PI). Replication defective Cyprinid herpes virus-3 (CyHV-3) as a combined prophylactic vaccine in carps. Funding Agency: The United States - Israel Binational Agricultural Research and Development Fund (BARD). Submission date: 9/16/2006. Duration: 2007-2010.
- \$1,000,000 **Burgess, S.C.** (Joint-PI), Bridges S.M. (Joint-PI), F.M.McCarthy (Co-PI) Gene Ontology Annotations, Tools and Educational Resources for Chicken and Cow Research. Funding Agency: USDA. Submission date: 6/15/2006. Duration: 2007-2010.
- \$648,842 Vaughn, R. (PI), Dampier, D.A. (Co-PI), Bridges S.M. (Co-PI), **Burgess, S.C.** (Co-PI) Grant Title: Southeast region critical infrastructure protection center initiative. Funding Agency: Department of Homeland Security. Submission date: 6/1/2006. Duration: Jan 1 2007-Dec 31 2007.
- \$359,185 J.A. Ainsworth (Director), **S.C. Burgess** (Co-Director), M.L. Lawrence (Co-Director). Summer Research for Veterinary Students. Funding Agency: NIH T35. Submission date: 10/1/2006. Duration: 2006-2011.
- \$110,000 J.A. Ainsworth (Director), **S.C. Burgess** (Co-Director), M.L. Lawrence (Co-Director). Summer Research for Veterinary Students. Funding Agency: Merck-

Merical Animal Health Grants Program 2006. Submission date: 10/1/2006. Duration: 2006-2011.

- \$409,185 M.L. Lawrence (Joint-PI), **S.C. Burgess** (Joint-PI), S. Bridges (Co-PI) and B Nanduri (Co-PI). .Experimental annotation of bovine respiratory disease pathogen genomes by protegenomic mapping. Funding Agency: NSF. Submission date: 03/02/2006. Duration: 2006-2008.
- \$10,000 K. O. Osterrieder (PI), M. Parcels (Co-PI), S. Reddy (Co-PI), H. Cheng (Co-PI), **S.C. Burgess** (Co-PI), H-J. Kung (Co-PI), H. Hunt. (Co-PI). 4th International workshop on the molecular pathogenesis of Marek's disease virus. Submission date: 12/16/2005. Duration: 2006.
- \$299,996 **S.C. Burgess** (Joint PI), M.L. Lawrence (Joint PI), Y. Dandas (Joint PI) S. Bridges (Joint PI). Bio-Energy Genomics for Bioethanol Production . Funding Agency: US Department of Energy. Submission date: 2/2/2006. Duration: 2006-2007.
- \$6,750,000 Scanes C (PI overall), Harpole S (Co-PI overall) **Burgess, S.C.**(Joint-PI: computational biology), Bridges S.M. (Joint-PI: computational biology). Computational biology section funded directly for \$558, 781 but this doesn't include money supported by the computational biology side that is allocated centrally. Grant Title: Post-genomic high performance computing. Funding Agency: NSF-EPSCoR. Submission date: 7/8/2005. Duration: 2006-2009.
- \$396,355 M.L. Lawrence (PI), S. Bridges (Co-PI) and **S.C. Burgess** (Co-PI). Integrating Listeria monocytogenes response to phagocytosis: a comparative functional genomics approach. Funding Agency: USDA. Submission date: 12/16/2005. Duration: 2006-2009.
- \$18,000 E. Memili (PI), **S.C. Burgess** (Co-PI), A. Kaya(Co-PI), C.Ostermeier(Co-PI), G.Page(Co-PI), J. Parrish(Co-PI). Defining sperm quality by transcriptome and proteome profiling. Funding Agency: Commercial. Submission date: 7/8/2006.
- \$3,000 **Burgess, S.C.**(PI), Singh, J. (PI) Grant Title: Laser-induced breakdown spectroscopy for medical diagnostic imaging. Funding Agency: Phase 0 SBIR NIH. Submission date: 5/30/2005. Duration: 2005.
- \$499, 744**Burgess S.C.** (PI), Luthe D (PI), Bridges, S. M. (Co-PI). Agricultural Functional Genome Annotation and Databases for Worldwide Access. Funding Agency: USDA. Submission date: 6/15/2004. Duration: 2006-2008.
- \$350,000 **Burgess S.C.** (PI). The mechanics of Marek's disease lymphoma and regression. Funding Agency: USDA. Submission date: 12/5/2004. Duration: 2006-2009.
- \$120,000 **Burgess S.C.** (PI) Doane S.; Bridges S.; Lawrence M. (Co-PI). Grant Title: Stress plasma proteomics across diverse vertebrate phyla: identifying biomarkers predictive

for channel catfish and chicken production, and human performance, under stress.
Funding Agency: USDA. Submission date: 12/3/2004. Duration: 2005-2007.

\$300,000 ***Burgess S.C.** (PI). Grant Title: Functional genomic analysis of Marek's disease lymphomagenesis directly ex-vivo. Funding Agency: USDA. Submission date: 7/1/2004. Duration: 2004-2007.

\$466,742 *Wood A.H. (PI) Burgess S.C., Ma P., Luthe D. (Co-PI) Grant Title: Acquisition of a MALDI TOF TOF Mass Spectrometer. Funding agency: NSF. Submission date: 1/6/2004. Duration: 2004.

\$50,009 **Burgess S.C.** (PI) Lamont S. (Co-PI). Grant Title: Integrated Functional Genomics Approach to Identifying Genes Associated with Salmonella Response. Funding Agency: USDA. Submission date: 11/10/2003. Duration: 2004-2007.

\$80,000 **Burgess S.C.** (PI) Armbrust K. (Co-PI). Grant Title: Integrated Functional Genomics Approach to Identifying Genes Associated with Salmonella Response. Funding Agency: Mississippi State Chemistry Laboratory. Submission date: 5/1/2004. Duration: 2004-2007.

\$17,806 **Burgess S.C.** (PI). Grant Title: Microcapillary HPLC & fraction collector for preanalytical fractionation prior to mass spectrometry. Funding Agency: NIH. Submission date: 6/15/2003. Duration: 2004.

\$79,055 **Burgess S.C.** (PI). Grant Title: Identifying novel molecular targets for controlling chicken immunosuppressive pathogens by proteome analysis. Funding Agency: USDA. Submission date: 5/31/2002. Duration: 2002-2005.

\$150,000 Parcels M. (PI) **Burgess S.C.** (Co-PI). Grant Title: Latent Virus Genome Expression of Marek's Disease Virus (MDV) and Its Contribution to Lymphomagenesis. Funding Agency: Arkansas Biotechnology Institute. Submission date: 8/1/2003. Duration: 2004-2007.

£600,000. *Kaufman J. (Joint-PI) **Burgess S.C.** (Joint-PI) , Davison T.F. (Joint-PI) , Kaiser P. (Joint-PI) , Young J.R. (Joint-PI). Grant Title: Program on poultry molecular vaccine adjuvants. Funding agency: Intervet UK competitive research grant. Duration: 2002-2005.

£63,000 ***Burgess S.C.** (PI). Grant Title: Enhancing in-ovo DNA vaccines in Poultry. Funding agency: British Egg Marketing Board national competitive research grant. Duration: 1999-2002.

€ 450,000 ***Burgess S.C.** (PI), Davison T.F. (Co-PI). Grant Title: Development of novel vaccines to control infections with newly emerging highly pathogenic Marek's disease viruses. Funding agency: European Union 5th Framework Program - Strategies to identify and control infectious diseases: Novel vaccines. Duration: 2000-2003.

- £60,000 ***Burgess S.C.** (PI). Grant Title: Inter and intra-line variation in the response to maternal vaccination and the transfer of subsequent maternal immunity from breeding hens to chicks. Funding agency: Tyson USA competitive research grant. Duration: 2000-2002.
- £285,000 ***Burgess S.C.** (PI), Davison T.F. (Co-PI). Grant Title: A novel vaccination strategy to induce anti-tumor immunity in Marek's disease that does not induce evolution of more virulent Marek's disease viruses. Funding agency: Intervet UK competitive research grant. Duration: 1998-2002.
- £100,000 ***Burgess S.C.** (Research Fellow), Davison T.F. (PI). Grant Title: Investigations into host cell-virus relationships and tumour immunity in Marek's disease Funding agency: BBSRC. Duration: 1995-1998.
- \$17,000 **Burgess S.C.** (PI) Grant Title: Undergraduate student summer Research Experience Opportunity award (REO). Funding Agency: NIH via Mississippi Functional Genomics Network (MSFGN). Submission date: 3/1/2004. Duration: May-August 2008.
- \$51,000 **Burgess S.C.** (PI) Whitwham R. (Co-PI). Grant Title: Undergraduate student summer Research Experience Opportunity award (REO); three students. Funding Agency: NIH via Mississippi Functional Genomics Network (MSFGN). Submission date: 3/1/2005. Duration: May-August 2005.
- \$60,883 **Burgess S.C.** (PI); Oppenheimer JEC; Chambers J. (Co-PI). Grant Title: Single-cell quantification of rat liver cytochrome P 450 2B1/2 Pilot Project year 2. Funding Agency: NIH (via COBRE). Submission date: 8/1/2003. Duration: 2004-2005.
- \$17,000 **Burgess S.C.** (PI) Whitwham R. (Co-PI). Grant Title: Undergraduate student summer Research Experience Opportunity award (REO). Funding Agency: NIH via Mississippi Functional Genomics Network (MSFGN). Submission date: 3/1/2004. Duration: May-August 2004.
- \$51,000 **Burgess S.C.** (PI) Whitwham R. (Co-PI). Grant Title: Undergraduate student summer Research Experience Opportunity award (REO); three students. Funding Agency: MSFGN. Submission date: 3/3/2003. Duration: May-August 2003.
- \$50,000 **Burgess S.C.** (Joint-PI), Bridges S. (Joint-PI) F.M. McCarthy. MSU President Foglesong Initiative to support New Conferences and Symposia. International Avian Genome Conference and GO Annotation Jamboree. Submission date: 3/28/2007. Duration: May-2008.
- \$21,000 **Burgess S.C.** (Joint-PI), Bridges S. (Joint-PI). MSU Learning community funding. IDB Learning community for functional genomics and systems biology. Spring & Fall 2006; Spring 2007.

- \$114,280 James N. Warnock, (PI); Shane Burgess, (Co-PI); Steven H. Elder, (Co-PI). Investigation of Differential Gene Expression in Porcine Aortic Valve Cells Exposed to Cyclic Strain. Funding Agency: LSBI. Submission date: 2/10/2005. Duration: 2005-2007.
- \$120,000 **Burgess S.C.** (PI). Doane S. (Co-PI); Bridges S. (Co-PI); Lawrence M. (Co-PI) Grant Title: The Human Performance Plasma Proteome: Identifying Biomarkers Predictive for Pilot Performance Under Stress. Funding Agency: Life Science and Biotechnology Institute (LSBI) MSU. Submission date: 6/10/2004. Duration: 2004-2006.
- \$80,623 Susan Bridges (PI), Shane Burgess (Co-PI), Stephanie Doane (Co-PI). From Macro to Micro Cognitive Science: Identifying Biomarkers of Performance Under Stress and Adaptive Expertise. Funding Agency: Institute for Neurocognitive Science and Technology MSU. Duration: 2004-2005.
- \$10,000 **Burgess S.C.** (PI). Grant Title: Establishment of 2-D DIGE for the molecular definition of Hodgkin's disease antigen (CD30) over-expressing lymphomas in a unique natural animal model.. Funding Agency: Mississippi Agricultural and Forestry Experiment Station (MAFES). Submission date: 10/12/2003. Duration: 2004.
- \$112,864 **Burgess S.C.** (PI) Cummings T. (Co-PI). Grant Title: The Chicken serum proteome. Funding Agency: LSBI MSU. Submission date: 5/19/2003. Duration: 2003-2005.
- \$121,120 **Burgess S.C.** (PI). Grant Title: Molecular definition of Hodgkin's Disease antigen (CD30) over-expressing lymphomas in a unique natural animal model. Funding Agency: LSBI MSU. Submission date: 3/4/2003. Duration: 2003-2005.
- \$120,000 Thomas G. (PI) **Burgess S.C.** (Joint-PI). Grant Title: Hydrogel-based Microfluidics for Transcription Factor Binding Assays. Funding Agency: LSBI MSU. Submission date: 7/6/2004. Duration: 2004-2006.
- \$97,850 Pharr G.T. (PI) **Burgess S.C.** (Joint-PI). Grant Title: Evaluation of methodology to identify developmental stages of B-cells in the chicken bursa of fabricius. Funding Agency: LSBI MSU. Submission date: 5/19/2003. Duration: 2003-2005
- \$106,415 Singh J. (PI) **Burgess S.C.** (Joint-PI). Grant Title: Cancer diagnosis using Laser Induced breakdown spectroscopy microprobes. Funding Agency: LSBI MSU. Submission date: 4/2/2003. Duration: 2003-2005.
- \$149,163 Lawrence M. (PI) **Burgess S.C.** (Joint-PI). Grant Title: Integrated Functional Genomics Approach to Determining Sub-Lethal Antibiotic Effects on Bacterial Virulence. Funding Agency: LSBI MSU. Submission date: 4/1/2003. Duration: 2003-2005.

C. TEACHING

Courses

Introduced the concept and practice of Oxbridge-style tutorials into CVM 5023 and 5093.

CVM Summer Research Experience Program (no course code). Professional (DVM) level, 10 hours contact time. Instructor: Leadership, Teamwork, Negotiating, Paradigms, Behavioural Event Interviewing, Crisis Communication & Introduction to Molecular biological and Immunological techniques. 2006, 2007

CVM 5990 01. Clinical Oncology Elective Lecture: "New Horizons" in cancer diagnosis. Instructor. 2007. (1 lecture).

CSE 4663 / 6663 Human-Computer Interaction. 2006. (Instructor; joint effort between CSE).

CSE 4990/6990: Bioinformatics. Instructor. 2006. (1 lecture).

CVM 8735: Mechanisms of Disease. Instructor. 2004, 2006.
Graduate and Professional (DVM) level Virology course (5 lectures and exam)

CVM 8315: Immunological Techniques. Instructor. 2003, 2005.
Graduate and Professional (DVM) level Practical Immunology course (5 lectures, 5 x 6 hour laboratories and exam)

CVM 8113: Advanced Diseases of Poultry. Instructor. 2003, 2005, 2007.
Graduate and Professional (DVM) level Poultry Immunology and Virology course (3 lectures and exam)

CVM 5023: Immunology and Mechanisms of Infectious Agents. Instructor. 2004, 2005, 2006, 2007. Professional (DVM) level Virology (5 lectures, 1 tutorial and 1 exam)

CVM 5093: Agents of Infectious Disease. Instructor. 2004, 2005, 2006, 2007.
Professional (DVM) level Virology course (4 lectures, 1 tutorial and 1 exam)

CVM 5069: Introduction to Interdisciplinary Study of Veterinary Medicine. 2002, 2003.
Professional (DVM) level problem-based learning instructor.

CVM 5003: Professional Development I. Instructor. 2003, 2004.
Professional (DVM) level genomics (1 lecture)

CVM7000a: Seminal Publications in Science I. Instructor of record. 2002-2006.
Graduate level course in which classical scientific works are analyzed (e.g. The Origin of Species by Charles Darwin and The structure of Scientific Paradigms by Thomas Khun).

CVM7000b: Seminal Publications in Science II. Instructor of record. 2003-2006.

Graduate level course in which classical scientific works are analyzed (e.g. The Origin of Species by Charles Darwin and The structure of Scientific Paradigms by Thomas Khun).

CVM7000c: Seminal Publications in Science III . Instructor of record. 2004-2006.

Graduate level course in which classical scientific works are analyzed (e.g. The Origin of Species by Charles Darwin and The structure of Scientific Paradigms by Thomas Khun).

CVM7000i: Frontiers in Biomedical Research I . Instructor of record. 2002-2006.

Graduate level course on contemporary Biomedical research based on weekly lectures given by world-renown scientists at the NIH campus in Maryland, USA.

CVM7000ii: Frontiers in Biomedical Research II. Instructor of record. 2003-2006.

Advanced graduate level course on contemporary Biomedical research based on weekly lectures given by world-renown scientists at the NIH campus in Maryland, USA.

CVM7000iii: Frontiers in Biomedical Research III. Instructor of record. 2004-2005.

Post doctoral level course on contemporary Biomedical research based on weekly lectures given by world-renown scientists at the NIH campus in Maryland, USA.

CVM8990-1 Special Topic: Gene Ontology Genome Annotation. Instructor of record. Summer 2005, 2006. Graduate student level course on genome structure, genome annotation and Gene Ontology.

CVM8990-2 Special Topic: Grantsmanship. Instructor of record. 2005.

Graduate student level course on the structure and writing of grants.

CVM8990-3 Special Topic: Gene Ontology Genome Annotation. Instructor of record. Fall 2005. Graduate student level course on genome structure, genome annotation and Gene Ontology.

CSE 4214: Introduction to Software Engineering. Instructor 2005, 2006.

CVM8990-3 Special Topic: Introductory computing for Biologists. 2005.

Susan Bridges (CSE) is the Primary Instructor for this course. I was the course instigator,organizer and Instructor of record at CVM.

ADS 4990/ADS 6990: Current Topics in Animal Cell and Molecular Biology. Instructor. 2005,2006

Internal competitively-funded MSU Learning community for Spring & Fall 2006, and Spring 2007. "Learning Community for Functional Genomics and Systems Biology". Instructor of record

DIS 5004: NAVLE Review. Instructor 2006, 2007. Course to prepare students for the North American Veterinary Licensing Examination.

Undergraduate Students

2008

One Mississippi Functional Genomics Network Student.

One DVM Summer Research experience program student.

2006-2007

Three international Students from Fontys School of Applied Sciences (Eindhoven, Netherlands; 9 months each).

2005-2006

Two international Students from Fontys School of Applied Sciences (Eindhoven, Netherlands; 9 months each).

2004-2005

Three Mississippi Functional Genomics Network Students.

One DVM Summer Research experience program student.

One international Student from Fontys School of Applied Sciences (Eindhoven, Netherlands; 9 months).

2003-2004

One Mississippi Functional Genomics Network Student

One DVM Summer Research experience program student.

One international Student from Fontys School of Applied Sciences (Eindhoven, Netherlands; 9 months).

2002-2003

Three Mississippi Functional Genomics Network Students.

One DVM Summer Research experience program student.

One international Student Fontys School of Applied Sciences (Eindhoven, Netherlands; 6 months)

Graduate Students: * = outside of CVM. ** = outside of MSU.

*Carrie Weaver (PhD, committee member, completed 2004; MSU)
*Chan Kyu Kim (MS, committee member, completed 2004; MSU)
Karen Dazo (PhD, committee member; MSU)
Dusan Kunec (PhD, Major Professor; MSU)
Bart van den Berg (PhD, Major Professor; MSU)
Amanda Cooksey (PhD, Major Professor; MSU)
Teresia Buza (PhD, Major Professor; MSU)
Shaymesh Kumar (PhD, Major Professor; MSU)
Divyaswetha Reddy (PhD, Major Professor; MSU)
**Gay Henson (PhD, committee member; UMMC)
*Veronica Scott (PhD, committee member; MSU)
*Nan Wang (PhD, committee member; MSU)
*Nan Wang (MS, committee member; completed 2005, MSU)
*Diana Chan (MS, committee member; MSU)
*Shane Sanders (PhD, committee member, MSU)
**Niroshan Thantrige (PhD, committee member; U. Guelph)
**Nick Tinsley (PhD, committee member; U. ARK)
**Hande Odaman-Mercan, (PhD, committee member; University of Missouri - Columbia)
*Husniye Imamoglu (PhD, committee member; Chemistry, MSU)
* Nelida Rodriguez (PhD, committee member; Animal and Dairy Sciences, MSU)
*Prashant Daggolu (PhD, committee member; Chemical Engineering, MSU)
Melissa Pleuger (2006 NIH summer research scholar, MSU. Major professor)
Hongbo Zheng (PhD, committee member, Institute for Clean Energy Technology, MSU)
Ashley Hill, MS (DVM/MS, committee member, MSU)
Y.M. Kang (PhD, committee member, Forestry, MSU)
Kaela Leonard (PhD, committee member; Chemical Engineering, MSU)
Soumya Keshavamurthy (PhD, committee member; Chemical Engineering, MSU)
*Scott Metzler (PhD, committee member, Ag & Bio Eng., MSU)
Loren Bright (PhD, committee member, MSU)
Ranjit Kumar (PhD, Major Professor; MSU)
Mary Beth Dail (PhD, committee member, MSU)
Ken Pendarvis (PhD, committee member, MSU)

Graduate Student IAH Compton:

Elizabeth Haygreen (PhD, Major Professor. Completed 2004; Bristol University, UK)
Enhancing in ovo vaccination against MDV and IBDV using novel DNA-vaccines

Where they have gone

Bas Baaten. Former technician. 2002. PhD Bristol University Medical School. 2002. Post Doc Edward Jenner Inst. for vaccine research, UK. 2005. Post Doc Sidney Kimmel Cancer Centre San Diego.

Elizabeth Haygreen. 2004. Post Doc Edward Jenner Inst. for vaccine research UK.

Marek Koter. Post Doc University of California at Irvine.

Joram Buza. Post Doc. Vaccine and Infectious Disease Organization (VIDO), Saskatoon SK, S7N, Canada.

D. SERVICE and ADMINISTRATION

Human resources managed: 19 people.

Assistant Professor: 2; Facilities Manager: 1; Program Manager: 1; Post Docs: 3; Senior Research Associate (PhD): 1; Research Associates: 2; PhD students: 7 ; Undergraduates (full time placement): 2; Student workers: 2.

Mentoring highlights

Unpaid consultant: S. Gwaltney (Dpt. Chemistry) and T. Pechan (LSBI), CVM. Increasing the confidence in biomarker identification by the means of quantum mechanical calculations. NIH. Submitted 2008.

2007. Mentoring, coaching and advice for Dr. Claudia Fernandez, School of Public Health, The University of North Carolina at Chapel Hill that lead to the launch of “Fast Track Leadership Development” at the University of North Carolina at Chapel Hill (<http://www.fasttrackleadership.org/>).

2007. Faculty advocate for Promotion and Tenure. Dr D Peterson. Dept. of Plant and Soil Sciences; MSU.

2007. Mentoring, coaching, advice and editing that lead to the funding, through the CVM Office of Development, of the Nestle-Purina lecture series in Human Animal Bond. \$10,000 initial funding, aiming for \$250,000 endowment.

Unpaid consultant: F.M.McCarthy, CVM. Noninvasive Characterization of Myocardial Infarction by Diffusion Tensor Magnetic Resonance Imaging. MAFES RIP. Funded 2007.

Unpaid consultant: F.M.McCarthy, CVM. Functional annotation of the Pig Genome using the Gene Ontology. USDA NRI. Submitted 2007. Note: Contribution to this grant application 30% of writing.

Unpaid consultant: J. Warnock, Ag and Bio-Engineering. Understanding the Pathological Implications of High Blood Pressure in Heart Valve Disease. NSF Career proposal. Submitted 2007. Note: Contribution to this grant application 30% of writing.

Unpaid consultant and collaborator: L. Prewitt, Forest products. CAA: Microbial Community and Gene Expression Profiles Produced During Decay of Resistant Woods in Forest Soil: Generation of a Research Mentor. Funded 2007, \$161,106. NSF # MCB-0641788.

Unpaid consultant: A. Crow, Center for Environmental Health Sciences. The Effect of a Mixture of Pesticides on the Rat Cardiac Proteome. Funded 2007. NIEHS # 1R03ES014725-01A.

Unpaid consultant: A. Minerick, Chemical Engineering. ABO Blood Antigen Dielectrophoresis for Medical Diagnostics: Synergy with Desktop Experiment Modules (DEMOs). NSF CAREER project proposal. Funded in 2007. Note: Contribution to this grant application 20% of writing.

2007 Established two research collaborations between faculty in Department of Clinical Sciences College of Engineering aimed at leading to NIH/NSF funding.

2007 Mentored, and then facilitated the placement of, former CVM DVM and Summer Research experience student into University of Florida graduate school program to do PhD in neurobiology

2006 PhD student Dusan Kunec selected to attend and present poster at the **EPSCoR** National Conference 2006 “ Rising above the Gathering Storm : Innovating to Compete in a Global Economy.”

2006. Bindu Nanduri promoted from Post Doc to Research Assistant Professor.

2006. Bindu Nanduri one of 25 people nationwide selected to attend the highly competitive *Introduction to Systems Biology course*, at the Institute for Systems Biology, Seattle, WA.

2005. Fiona McCarthy promoted from Post Doc to Research Assistant Professor then to Tenure track assistant professor.

2005. Bindu Nanduri one of 25 people nationwide selected to attend the highly competitive *Proteomics informatics course*, at the Institute for Systems Biology, Seattle, WA.

Service to Office of Technology Commercialization

2007 For C. Kasper. Development of DNA fingerprinting for MSU Turfgrass patents and future work.

2007 Host for Syngenta.

Extension/Industry Research

2006 – present. Founding member and steering Committee of the Mississippi Computational Biology Consortium (MCBC; <http://mcbc.usm.edu/mcbc>)

“Mechanisms of action of a novel vaccine.” Vaccine company *Merial*. Completed February 2006.

Alpha and Beta Test site (one of only 5 worldwide) ThermoElectron corporation SEQUEST Cluster 3.2 and Xcalibur 2.0 software. Ongoing since 2004.

Alpha and Beta Test site (one of only 10 worldwide) ThermoElectron corporation Bioworks Proteomics software (first peer-reviewed publication worldwide for this software). Ongoing since 2004.

CVM Poultry Health Group. Advise on health issues in MS poultry as these arise.

“Using state of the art biotechnology to solve poultry quality issues”. *Sanderson Farms.* ; completed December 2005.

“Proteomic analysis of breast muscle vaccine residue”. Vaccine company *Bio-immune*; completed July 2005.

“Intra- and inter-line variation in maternal immunity, and vertical transfer of that immunity, in elite broiler breeders” *Cobb Breeding Company USA*; completed August 2004.

Effect of sub-minimum inhibitory concentrations of antibiotics on bovine respiratory complex pathogens for the pharmaceutical company *Alpharma*; completed July 2004.

Instructing CVM faculty, students and staff in real-time quantitative PCR. Ongoing since 2002.

Instructing local USDA ARS personnel in real-time quantitative PCR. Ongoing since 2002.

National Animal Genome Research Program (NAGRP) National Research Sponsored Project-8 NRSP-8. 2006-present. Technical Committee member.

Multistate Research Projects in Animal Breeding, Genetics & Genomics; NE1016 : Genetic Bases for Resistance and Immunity to Avian Diseases 2002-2005 Technical Committee member. 2006-present Collaborator.

Multistate Research Projects in Animal Breeding, Genetics & Genomics; NC1008 : Advanced Technologies for the Genetic Improvement of Poultry. 2006-present. Technical Committee member.

Multistate Research Projects in Animal Breeding, Genetics & Genomics NC1027: An integrated approach to control of bovine respiratory diseases. 2005-present. Technical Committee member.

Multistate Research Projects in Animal Breeding, Genetics & Genomics; NC-1010: Cattle Genomic Data: Biology, Applications and Outreach. 2005-present. Technical Committee member.

“Molecular vaccine adjuvants and novel immuno-enhancement.” Vaccine company *Akzo Nobel (Intervet)*; completed December 2002.

“Tumour-antigen vaccination against Marek’s disease.” Vaccine company *Akzo Nobel (Intervet)*; completed December 2002

Resistance to zoonotic bacterial enteric commensals of poultry. *Cobb Breeding Company USA*; completed December 2001.

Novel avian in-ovo vaccine delivery. *British egg marketing Board*; completed December 2001.

Enhancing chicken neonatal-immunity by targeting the innate immune system, using molecules identified by high-throughput screening. *Eli-Lilly and Co.*; completed December 2001

USDA Collaborative Agreements

2008-2012 H.A. Olanrewaju , USDA ARS Poultry Research Unit, MS. Managerial and Nutritional Strategies to Improve Production Efficiency of Heavy Broiler Chickens. Expertise in proteomics methods, analysis, bioinformatics & computational biology for proteomics and proteomics-based systems biology modeling.

2007-2011. S.L. Branton and J.D. Evans, USDA ARS Poultry Research Unit, MS: Countermeasures to Prevent and Control Avian Mycoplasmosis. Expertise in proteomics methods, analysis, bioinformatics & computational biology for proteomics and proteomics-based systems biology modeling.

2004-2006. S.L. Branton, USDA ARS Poultry Research Unit, MS: Development of a recombinant vaccine to protect against *Mycoplasma gallisepticum* infections in poultry. Expertise in molecular biology, especially real-time PCR.

University Committees

Oct 2008 – Present. Vice President for Finance & Administration's committee on Time and Effort accounting.

May – Sept 2008. Vice President for Research and Economic Development's Taskforce on the future of research at Mississippi State University.

Jan 2008-present CVM DVM/PhD program steering committee member.

August 2007-Dec 2008 CVM DVM/PhD program planning committee member.

June 2007-present CVM Research Day planning committee member.

May– September 2007. Taskforce on Guidelines on Non-tenure Track Research Faculty in the Department of Basic Sciences, CVM. Included issues regarding non-tenure track faculty with respect to status, expectations, and privileges, and makes the following recommendations for guidelines.

May 2007 – present CVM Taskforce on postgraduate education.

May 2007 CVM Research Day taskforce member

August 2006- present. CVM Dean's committee to increase the number of applicants to MSU CVM.

August 2006- Feb 2007. Search Committee member for Head of Department, CVM Department of Basic Sciences.

Jan 2005-Dec 2006. CVM Program of Excellence, Accountability, and Quality (PEAK) Employee development committee. Faculty representative.

2005 –present. Multistate Research Projects in Animal Breeding, Genetics & Genomics; NC1008 : Advanced Technologies for the Genetic Improvement of Poultry. Technical Committee

2005 –present. Selected by the MSU VP for Agriculture to be the MSU representative on the University & Industry Consortium. The UIC represents the agriculture industry and land grant universities. It has restricted membership and its mission is to create a greater competitive advantage in agricultural science, assisting academia and industry in achieving greater success within a changing social climate and global marketplace.

March 2005-Dec 2006 . Search Committee member for Director of the MSU Life Sciences and Biotechnology Institute.

2005- 2007. CVM Senator, MSU Division of Agriculture, Forestry and Veterinary Medicine Faculty Senate.

2006- present. Vice- Chair AVMA AAAP committee on biotechnology.

2002- 2006 (5 years). MSU Institutional Biosafety Committee. Committee member.

2002- present. AVMA AAAP committee on avian tumor viruses. Committee member.

2002- 2006. AVMA AAAP committee on biotechnology. Committee member.

2005 CVM Dean's Faculty Research, Teaching and Service Award Selection Committee.

July 2005 - present. MSU Faculty Research Advisory Committee. Committee member.

July 2005 Search Committee for Tree Genetics/Molecular Biology Faculty Position, MSU Department of Forestry.

2004. CVM Assoc Dean for Pub Affair's Staff Award Selection Committee.

2004. New Faculty Selection committee Animal and Dairy Sciences.

Institutional service and Task Forces

Ongoing: Linking our homeland security educational initiative (see funding) for DVMs in MS to the CVM Professional Development course, to the AVMA and continuing Education as well as to the State's Plum Island initiative.

July 25, 2007. Member of MSU Delegation for Oak Ridge National Laboratory BioEnergy Meeting

Feb 13-14, 2007: Organized visit to MSU by Dr Robert Heckert, DVM PhD. Fellow, Systems Division, Homeland Security Institute. Dr Heckert visited the Jackson Facility and lectured in the CVM Professional Development course. Part of State's Plum Island initiative.

2006-present. Division of Agriculture, Forestry and Veterinary Medicine Faculty Senator (Current elected Vice President).

August 30 – October 11, 2006. CVM Computer Services Task Force to study, analyze, and recommend strategies to the College administration for positioning CS to provide needed services and maintenance while deploying long term solutions for development and enhancing effective service.

August 15, 2006. MSU Provost's New Faculty orientation panel for research success. A panel of seven to discuss issues relating to having a successful research program.

December 7, 2005. USDA Animal Genomics Workshop, St Louis, MO. Policy forum for USDA NRI Animal Protection programs focus and direction.

October 13, 2005. Review of Mississippi State University's Life Sciences Program: Institute for Digital Biology

August 15, 2005, 2006. MSU Provost's panel for New Faculty orientation. A panel of seven to discuss issues relating to preparing for promotion and tenure

August 11, 2005. Member of MSU Delegation for Oak Ridge National Laboratory reciprocal visit to MSU.

July 27, 2005. MSU representative for Biological computing, EpSCoR planning meeting, Jackson, MS.

March 4, 2005. Member of MSU Delegation for Congressional visit to Oak Ridge National Laboratory, TN.

September 2004-present. CVM Dean's Quality Initiative: CVM Employee Development and Enrichment TaskForce. Committee member.

August 2004-present. MSU Vice President for Research's Task Force for Future Development of Computational Biology for Biomedical and Other Applications at MSU. Committee member.

September 22-23, 2004. USDA Animal Genomics Workshop, Washington DC. Policy forum for USDA research in the future. Remit: Poultry; Long-Term Challenges in Making Use of Genome Sequence Information Through Functional Genomics. The only other invitees for all of poultry for the USA are H. Cheng (USDA); H. Lillehoj (USDA) and L. Cogburn (University of Delaware). In total, representing the three production animal species that will have their genomes sequenced (Chicken, Cow and Pig), only six academicians are invited to this meeting from all universities in USA. The others are all full professors.

29-31 October, 2004. National Workshop on Advantages of agriculturally important domestic species as biomedical models, Michigan State University. One of 75 invited attendees nationwide. Objectives 1. provide a forum for exchange of ideas among scientists that use domestic species as biomedical models, officials at NIH and USDA, and university administrators at land grant institutions; 2. emphasize the scientific importance of domestic species as biomedical models that contribute to human and animal health and well-being, and animal agriculture; 3. identify high priority research areas that could be advanced by enhanced use of domestic animals as biomedical models; 4. explore the potential need and justification for an interagency program that would be co-funded by one or more institutes within the NIH and by USDA-CSREES and perhaps others (industry, state governments) to support research in high priority areas that could be advanced by use of domestic species as comparative animal models.

June 2000. Invited participant BBSRC policy workshop "Alternatives to chemotherapeutics in animal production systems".

Invited Lectures at MSU

7 April 2006. Interrogating laundry lists to understand biological systems. Biological Sciences Seminar Series

2 November 2005. GOing in search of the meaning of life in a Post-Genome world. Institute for Neurocognitive Science and Technology Fall Colloquium.

2 June 2005. Functional genomics: between the genome sequence and reality. MSU college of Engineering, Scientific Computing research focus meeting.

23 April 2005. Presentation to MSU External Research Advisory Committee for MSU Office of the Vice President for Research.

31 March, 2005. Biocuration at Mouse Genome Informatics (MGI), A summary and discussion of Dr Fiona McCarthy's training at the MGI, Jackson Laboratory, Maine.

30 March, 2005. Computational Biology at MSU. Mississippi Gulf Coast Community College NSF presentation for Information Technology Students. Invited by Prof. S. Harpole.

19 October, 2004. Marek's disease is a natural model for lymphomas over-expressing Hodgkin's disease antigen (CD30) and other 2-D LC MS². MSU Life Sciences and Biotechnology Institute ProtSem series seminar.

14 September, 2004. "An introduction to "Systems Biology"". Biomedical Computing Cross-Training Seminar for NIH planning grant for a National Program of Excellence in Biomedical Computing (NPEBC) targeting computational simulation in environmental health sciences.

4 February 2003: "Summary of Inaugural Proteomics training course, Cold Spring Harbor Laboratories Nov 2002". MSU Life Sciences and Biotechnology Institute.

26 September 2002: "Systems biology - yet another biological buzz-phase, but with real, positive, implications for poultry research at MSU". MSU Poultry Science Department.

13 September 2002: "Gene Expression and Signal Transduction". Biomedical Computing Cross-Training Seminar for NIH planning grant for a National Program of Excellence in Biomedical Computing (NPEBC) targeting computational simulation in environmental health sciences.

24 July 2002: "Technology Focus: Aptamers and Laser capture microdissection". MSU Health Biotechnology working Group.

4 April 2002: "Are lymphoma cells really neoplastically-transformed or are they "hyperactive-memory" lymphocytes?" MSU Life Sciences and Biotechnology Institute. 17 March 2002: MSU Life Sciences and Biotechnology Institute. Experiences with specific quantification of nucleic acids using real-time PCR

6 March 2002. "A Solution to Vaccine-driven Evolution of Pathogen Hypervirulence?-The Oncogenic Marek's Disease Herpesvirus Model in the Chicken". Biochemistry Department Lecture Series.

International Scientific Meetings Organized

Delivering Value from Avian Genomes, May 19-20, 2008, Mississippi State University, MS.

The *Blueprint for USDA Efforts in Agricultural Animal Genomics 2008-2017*, sequencing of the zebra finch genome and NIH acknowledgement of the importance of avian species in human disease have all concentrated attention on avian genomics. This conference focused on how value can be derived from genomics and functional genomics investments in avian research.

Avian Gene Ontology(GO) and Microarray Data Modeling, May 21-22, 2008. Mississippi State University, MS. The workshop provided experimental-data based examples of how the GO can be used for biological modeling of high-throughput data and will serve as a forum for prioritizing the functional annotation of avian genes. Attendees are encouraged to bring their own datasets to work with.

International Scientific Meetings Committees

August 5 - August 8, 2006. 4th International Workshop on the Molecular Pathogenesis of Marek's Disease. University of Delaware.

Oct 25-28 2005 MSU organizer Fifth Virtual Conference on Genomics and Bioinformatics. 30 participants MSU wide; Conference focuses on the systematic study of molecular structure and dynamics of genomes.

6-11 October 2002. United States-Israel Binational Agricultural Research and Development Fund, Workshop on Molecular Pathogenesis of Marek's disease and Avian Immunology. Limassol, Cyprus.

Other

Nov 3-5, 2008. Organizer and Host for visit to MSU campus by Sir Richard Roberts, Nobel Laureate, 1993 including seminar for Jack Hatcher Entrepreneurship Institute with MSU College of Business and Bagley College of Engineering.

Oct. 20-24, 2008. Co-sponsor of visit to MSU by Dr Marty Becker as part of Human Animal Bond week at CVM.

Aug 2-4, 2008. Faculty Representative: 2008 Merck/Merial Veterinary Scholar National Symposium Michigan State University, MI.

Aug 3-5, 2007. Faculty Representative: 2007 Merck/Merial Veterinary Scholar National Symposium NIH Campus, Washington, DC.

July 28-31, 2005. Faculty Representative: 2005 Merck/Merial Veterinary Scholar National Symposium University of Georgia.

September and December 2005. Sanderson Farms visit to develop joint Sanderson/CVM DVM Masters program dual degree.

Aug 2004- Dec 2004. Post-doctoral Researcher grant writing course. Coordinator and reviewer of this course run by Jerald Ainsworth.

E. PROFESSIONAL DEVELOPMENT

National: 2006-present: Food Systems Leadership Institute Fellow (FSLI: <http://www.fsli.org/index.cfm?showpage=179>). The FSLI is a program of the National Association of State Universities and Land-Grant Colleges (NASULGC) with support from the W.K. Kellogg Foundation. The leadership program is a highly selective nationwide (20 fellows are selected each year) and the program is designed for experienced leaders. Fellows must also be nominated by their organizations for their exceptional potential. I am the youngest, and most junior in academic rank, FSLI fellow ever selected. The typical FSLI Fellow is a department head or above and approximately half of the Fellows are associate deans.

Personal and organizational leadership development instruments and analyses.

2006 Myers Briggs Type Indicator, Step I: explains psychological type and innate preferences for four aspects of personality: orientation to the outer world, data gathering, decision making, and lifestyle. This “grandfather of all leadership assessment tools” is the most commonly used leadership development instrument and has the greatest amount of validating research behind it. It contributes to developing a “leadership language” for organizations and provides an insightful tool to understanding how to connect and communicate with others. This instrument gives insight into personality structures and how they define organizational culture.

2006 California Psychological Inventory 260: objectively describes to individuals the way others see them. It builds on the exceptional history, validity, and reliability of the *California Psychological Inventory*[™] (CPI[™]) assessment, transforming this trusted resource into a leadership development tool for today’s organizations. Its 260 items measure more than two dozen scales in such areas as dealing with others, self-management, motivation, thinking style, personal characteristics, and work-related characteristics.

2006 The CPI 260 Coaching Report for Leaders: benchmarks the CPI 260 instrument against scores for successful leaders and managers in business and industry.

2006 360-feedback survey. The Discovery Learning 360 is a well-respected business-based instrument that gathers input from up to 18 stakeholders (boss/supervisor, peers, direct reports, and others) on 40 different critical skills in organizational management and leadership. The instrument also captures qualitative input on 5 questions specific to the FAST TRACK program goals.

2007 Myers Briggs Type Indicator, Step II: in addition to the above, explains the individual’s unique expression of their particular psychological type.

2007 Fundamental Interpersonal Relationship Orientation-Behavior (FIRO-B): provides insight on how one’s behaviors are “read” by others in organizations. It can help explain issues of miscommunication as well as personal connectedness to the organization itself, the team, and the group’s objectives. This instrument assesses behaviors around including others, control, and expressing support or affection and helps participants identify their significant

personal motivators. The insights from this instrument help explain the basics of human motivation for leaders and managers. Because of its demonstrated usefulness, this is the second most commonly used instrument in corporate leadership training.

2007 Bar-On EQi (Emotional Intelligence): directly addresses the “soft skills” component of leading, managing, and working with others. The *EQi* compares responses to the general population’s behaviors in attending to the emotional patterns that influence one’s ability to succeed in coping with environmental demands and pressures.

2007 The Change Style Indicator: describes three main styles of dealing with change (conservator, pragmatist, or originator) and identifies the preferred change style of the participant. The debrief session discusses how to understand and communicate with others of differing change style orientations and how to successfully sell the change message to stakeholders.

2007 The Paper Planes Simulation: this day-long simulation engages participants around innovation and change: how to create different outcomes by applying system changes. The simulation also investigates communication in organizations, role delineation, and teamwork.

2007 Thomas-Kilmann Conflict Mode Instrument (TKI): is the world’s best-selling instrument for conflict resolution. The forced-choice inventory identifies a person’s preferred conflict-handling style, or mode, and provides detailed information about how he or she can use the five modes—competing, avoiding, accommodating, compromising, and collaborating—effectively. Using the TKI, individuals can learn to move beyond conflict and focus on achieving organizational goals and business objectives. Individuals and organizations can apply the TKI to such challenges as change management, team building, stress management, negotiation, and communication.

2007 Decision Style Profile: Decision Style Profile focuses on improving decision-making skills. It evaluates the appropriateness with which respondents include others in the decision-making process and the extent to which respondents consider five critical Decision Factors in their decision processes.

On-site professional development at MSU CVM

2006

- How to Become a Better Communicator (Skill Path [<http://www.skillpath.com>]; Full Day);
- Coaching and Teambuilding Skills for Managers and Supervisors (Skill Path; Full Day).
- Conflict Resolution and Confrontation Management Skills (Skill Path; Full Day).
- Negotiation Skills (MSU College of Business Administration; Full Day).
- Teamwork (MSU College of Business Administration; Full Day).

2007

- Strategic Performance Management (Skill Path; Full Day)
- Total Customer Service (Skill Path; Full Day)

2007-2008 MSU Faculty Leadership Program. Selected as one of twenty for year-long MSU Senior Academic and Research Leadership program.

2008 Leadership Summit, Mississippi State University, College of Business
(<http://www.aoce.msstate.edu/summit/>)

Professional Development Reading

1. Barabási, A.-L. 2003. *Linked : how everything is connected to everything else and what it means for business, science, and everyday life.* Plume, New York.
2. Bernstein, A. J., and S. C. Rozen. 1989. *Dinosaur brains.* Nightingale-Conant,, Chicago, Ill.
3. Brafman, O., and R. Brafman. 2008. *Sway : the irresistible pull of irrational behavior,* 1st ed. Doubleday, New York.
4. *Chronicle of Higher Education.*
5. Collins, J. C. 2001. *Good to great : why some companies make the leap--and others don't,* 1st ed. HarperBusiness, New York, NY.
6. Collins, J. C. 2005. *Good to great and the Social Sectors,* 1st ed. HarperBusiness, New York, NY.
7. Connors, R., T. Smith, and C. R. Hickman. 2004. *The Oz principle : getting results through individual and organizational accountability,* [Rev. and updated ed. Portfolio New York, N.Y.
8. Covey, S. R. 2006. *The 8th habit: from effectiveness to greatness.* Running Press, Philadelphia, PA.
9. Covey, S. R. 1990. *The seven habits of highly effective people : restoring the character ethic,* 1st Fireside ed. Fireside Book, New York.
10. Drucker, P. F. 2001. *The essential Drucker : selections from the management works of Peter F. Drucker,* 1st ed. HarperBusiness, New York.
11. Fisher, R., W. Ury, and B. Patton. 1991. *Getting to yes : negotiating agreement without giving in,* 2nd ed. Houghton Mifflin, Boston. Florida, R. L. 2004. *The rise of the creative class : and how it's transforming work, leisure, community and everyday life.* Basic Books, New York, NY.
12. Friedman, T. L. 2007. *The world is flat: a brief history of the twenty-first century,* 1st further updated and expanded hardcover ed. Farrar, Straus and Giroux, New York.
13. Gladwell, M. 2008. *Outliers : the story of success,* 1st ed. Little, Brown and Co., New York.
14. Goldstein, N. J., S. J. Martin, and R. B. Cialdini. 2008. *Yes! : 50 secrets from the science of persuasion.* Free Press, New York.
15. Goodwin, D. K. 2005. *Team of rivals : the political genius of Abraham Lincoln.* Simon & Schuster, New York.
16. Gunsalus, C. K. 2006. *The college administrator's survival guide.* Harvard University Press, Cambridge, Mass.
17. Handy, C. B. 1989. *The age of unreason.* Business Books, London.
18. Hecht, I. W. D. 1999. *The department chair as academic leader.* Oryx Press, Phoenix, Ariz.

19. Heifetz, R. A. 1994. Leadership without easy answers. Belknap Press of Harvard University Press, Cambridge, Mass.
20. Heifetz, R. A., and M. Linsky. 2002. Leadership on the line : staying alive through the dangers of leading. Harvard Business School Press, Boston, Mass.
21. Hunter, J. C. 1998. The servant : a simple story about the true essence of leadership. Prima Pub., Rocklin, Calif.
22. Kim, W. C., and R. Mauborgne. 2005. Blue ocean strategy : how to create uncontested market space and make the competition irrelevant. Harvard Business School Press, Boston, Mass.
23. Kotter, J. P. 1996. Leading change. Harvard Business School Press, Boston, Mass.
24. Kuhn, T. S. 1996. The structure of scientific revolutions, 3rd ed. University of Chicago Press, Chicago, IL.
25. Lencioni, P. 2004. Death by meeting : a leadership fable-- about solving the most painful problem in business, 1st ed. Jossey-Bass, San Francisco, CA.
26. Lencioni, P. 2002. The five dysfunctions of a team : a leadership fable, 1st ed. Jossey-Bass, San Francisco.
27. Lencioni, P. 1998. The five temptations of a CEO : a leadership fable, 1st ed. Jossey-Bass, San Francisco.
28. Lencioni, P. 2000. Obsessions of an extraordinary executive : the four disciplines at the heart of making any organization world class, 1st ed. Jossey-Bass, San Francisco.
29. Levitt, S. D., and S. J. Dubner. 2005. Freakonomics : a rogue economist explores the hidden side of everything, 1st ed. William Morrow, New York.
30. Miller, J. G. 2004. QBQ! : the question behind the question : practicing personal accountability in work and in life. G. P. Putnam's Sons, New York.
31. Musselwhite, C., and R. Jones. 2004. Dangerous Opportunity p. 162 Xlibris Corporation
32. Padilla, A. 2005. Portraits in leadership : six extraordinary university presidents. Praeger, Westport, Conn.
33. Patterson, K. 2002. Crucial conversations : tools for talking when stakes are high. McGraw-Hill, New York.
34. Patterson, K. 2008. Influencer : the power to change anything. McGraw-Hill, New York.
35. Silvia, P. J. 2007. How to write a lot : a practical guide to productive academic writing, 1st ed. American Psychological Association, Washington, DC.
36. Sutton, R. I. 2007. The no asshole rule : building a civilized workplace and surviving one that isn't, 1st ed. Warner Business Books, New York.
37. Templar, R. 2005. The rules of work : the unspoken truth about getting ahead in business. Prentice Hall, Upper Saddle River, N.J.
38. Watkins, M. 2003. The first 90 days : critical success strategies for new leaders at all levels. Harvard Business School Press, Boston, Mass.
39. Wergin, J. F. 2007. Leadership in place : how academic professionals can find their leadership voice. Anker Pub. Company, Inc., Bolton, Mass.

F. DETAILED EMPLOYMENT HISTORY PRIOR TO MSU CVM

April 2001- August 2001. Senior Research Scientist Seconded to Institute for Animal Health, (IAH), Pirbright laboratory: World Reference Laboratory for Exotic Animal Disease during Foot and Mouth Disease crisis.

- Responsible for all sample submission, managing test results and result dissemination.
- Reported directly to Head of World Reference Laboratory and Head of Laboratory.
- Managed 4 Veterinarians and 3 clerical staff.
- Communicated with regional control centers.
- Prepared reports for senior administrators at IAH and MAFF (now DEFRA) as well as UK Prime Minister's (RH Tony Blair) office.

1998-2001 Senior Research Scientist (Associate Professor equivalent). Institute for Animal Health, (IAH), Compton, UK.

- The IAH is the largest research institute in the United Kingdom dedicated to the health of farm animals.
- Research scientist.
- Invited extramural member, Veterinary students enrolment committee for 2001 and 2002 intake, Bristol University Veterinary School.
- Line manager for two lab technicians.
- Primary PhD supervisor for competitively-funded project "Enhancing in-ovo DNA vaccines in Poultry".
- Involved in technology transfer, and contract negotiations, in partnership with IAH scientists and industrial partners.
- Line manager for technical staff.
- Writing proposals and designing meetings to secure future industrial collaborations and funding.
- Collaborating with other laboratories at IAH on specific projects.
- Design of Ph.D., M.Sc. and undergraduate projects.
- IAH representative for successful multi-disciplinary, multi-nation proposal for European Union 5th Framework Programme – “Strategies to identify and control infectious diseases: Novel vaccines”.
- IAH representative in multi-disciplinary, multi-nation proposal for European Union 5th Framework Programme – “Strategies to identify and control infectious diseases: Antimicrobial drug resistance and changes of virulence”.
- “Exceptional performance award” for work since appointment as Senior Research Scientist.

1995-1998 Research Fellow. Institute for Animal Health, (IAH), Compton, UK.

- Avian Immunopathology, Institute for Animal Health, Compton, UK.

- Elected to IAH Academic committee (1996-1997) after nomination by the head of the division of Immunopathology.

1993-1995 Divisional Veterinary Manager. Marine Harvest International, Edinburgh, Scotland UK.

- At the time of my employment Marine Harvest International was the world's largest aquaculture company.
- Responsible for prevention and treatment of health and production problems in Atlantic salmon for one half of the company's biological assets: 11 seawater sites with 500,000 fish/site, 4 fresh water sites, 2 hatcheries.
- Lead and managed 17 staff.
- Designed, implemented and supervised routine health monitoring systems.
- *Named Veterinary Surgeon* for medicinal trials contracted by pharmaceutical companies. All work carried out in compliance with "good laboratory practice" (GLP).
- Designed and implemented epidemiological studies and control strategies for sea-lice (*Lepeoetherius salmnonis*).
- Designed and implemented a central data storage and presentation system that allowed a planned strategic approach to sea-lice control and minimized the use and discharge of therapeutic drugs.
- Designed and implemented a central computer database collection and routine monitoring of blood lipase as a diagnostic indicator for "Pancreas Disease".
- Investigated polyunsaturated fatty acid, Vitamin E, and copper nutrition with regard to pathology, product quality, feed quality, pigment uptake, feed conversion and growth.
- Histopathology.

1992 - 1993 Veterinary Surgeon. A.P. Robinson Veterinary Surgeons, England, UK.

- Managed branch clinic including one other veterinarian and 2 staff.
- Large and small animal and equine veterinary work.
- Introduced herd health scheme, geriatric and renal screening in small animals, specialist radiological procedures, client newsletters and fact sheets.

1991 - 1992

A. Veterinary Radiology Residency. Murdoch University, Department of Clinical Studies, Perth, Western Australia.

- Clinical radiology and radiography.
- Clinical ultrasonography.
- Taught final year veterinary students.
- Referral radiology for practitioners.
- Referral radiology and radiography for Perth Zoological Gardens.
- Preparation and presentation of extra mural material for post graduate seminar.
- Research studies using both radiology and ultrasound.

- Preparation and presentation of veterinary techniques to human radiographers and ultrasonographers.
- On call for small animal medicine and surgery.

B. Emergency Veterinary Surgeon. Northern Suburbs Emergency Veterinary Clinic, Perth, Western Australia.

- One of three founding veterinarians.
- Emergency small animal and avian medicine and surgery.
- Established budgets and charges.
- Manager for 2 staff.

1989 – 1991 Veterinary Surgeon. Lynwood Veterinary Clinic, Ferndale, Western Australia.

- First practice position; sole-charge clinician.
- All after hours duty.
- Large and small animal veterinary medicine and surgery.
- Established budgets, implemented charges, maintained inventory and dealt with waste disposal.
- Manager of 4 staff.