

May, 2007

CURRICULUM VITAE

ERNEST GUS COTHRAN, JR.

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EDUCATION

B.S. Biology, North Texas State University, Denton, Texas - 1973

M.S. Zoology, North Texas State University, Denton, Texas - 1975

THESIS TITLE: "Genetic Differentiation and Evolution in the Ground Squirrel
Subgenus *Ictidomys* (*Spermophilus*)"

Ph.D. University of Oklahoma, Norman, Oklahoma - 1982

DISSERTATION TITLE: "Genetic, Karyotypic and Morphologic
Differentiation of the Semispecies
Spermophilus mexicanus and *Spermophilus*
tridecemlineatus"

CURRENT POSITION:

2006-present Clinical Professor, Department of Veterinary Integrative Biosciences,
College of Veterinary and Biomedical Sciences, Texas A&M
University, College Station, TX 77843-4458

PROFESSIONAL EXPERIENCE:

2000-2006 Research Professor, Department of Veterinary Science, and
Director, Equine Blood Typing Research Laboratory,
University of Kentucky, Lexington, KY 40546-0076

1992-2000 Associate Research Professor, Department of Veterinary Science,
University of Kentucky, Lexington, KY 40546-0076

1991-1992 Adjunct Professor, Department of Biological Sciences,

- University of North Texas, Denton, TX 76203
- 1986-1992 Assistant Research Professor, Department of Veterinary Science, 101 Animal Pathology, University of Kentucky, Lexington, KY 40546-0076
- 1985-1986 Assistant Scientist, Department of Genetics, Southwest Foundation for Biomedical Research, San Antonio, TX 78284
- 1982-1985 Postdoctoral Scientist, Department of Genetics, Southwest Foundation for Biomedical Research, San Antonio, TX 78284
- 1981-1982 Research Analyst, Population Genetics Laboratory, Savannah River Ecology Laboratory, Aiken, SC 29801
- 1979-1981 National Environmental Research Park Research Assistant, Savannah River Ecology Laboratory, Aiken, SC 29801
- 1977-1979 Teaching Assistant, Department of Zoology, University of Oklahoma, Norman, OK 73019
Courses taught (laboratory sections): Introductory Zoology; Introductory Zoology (Honors Program); Invertebrate Biology; Human Physiology; Ecology; Ichthyology
- 1975-1977 Research Assistant, University of Oklahoma Biological Survey, Norman, OK 73019
- 1975-1977 Curatorial Assistant, Division of Mammals, Stovall Museum of Science and History, University of Oklahoma, Norman, OK 73019
- 1973-1975 Graduate Teaching Assistant, Department of Biological Sciences North Texas State University, Denton, TX 76201
Courses taught (laboratory sections): Introductory Zoology; Animal Ecology
- 1973 Undergraduate Research Assistant, Department of Biological Sciences, North Texas State University, Denton, TX 76201

GRANTS AND AWARDS:

- Principal Investigator - Theodore Roosevelt Memorial Foundation Grant, American Museum of Natural History. 1976.
- Principal Investigator - National Environmental Research Park Travel Grant. 1979.

- Principal Investigator - Southeastern Forest Experimental Station, Clemson University, Studies of Endangered and Threatened Wildlife in Southern Forest Grant. Genetic variability in the red-cockaded woodpecker: Studies of related species. 1 yr., total direct costs \$15,000. 1982.
- Principal Investigator - Biomedical Research Support Grant, Division of Research Resources, National Institute of Health. Inbreeding and reproduction in a marsupial used in biomedical research. 1 yr., total direct costs \$15,437. 1983.
- Principal Investigator - Biomedical Research Support Grant, Division of Research Resources, National Institutes of Health. Inbreeding of a marsupial used in biomedical research. 1 yr., total direct costs \$15,372. 1984.
- Co-Investigator - NIH, HD/14487. Genetic variants of blood proteins and health. L.R. Weitkamp, Principal Investigator. 3 yr., total direct costs \$438,347. 1985.
- Co-Principal Investigator - NIH, RR01 602-04. A laboratory marsupial used in biomedical research. J.L. VandeBerg, Principal Investigator. 3 yr., total direct costs \$225,882. 1985.
- Consultant - US Department of Interior, National Park Service Grant. Genetic management of barrier island horse herds. R.J. Warren, Principal Investigator. 2 yr., total direct costs \$28,845. 1986.
- Principal Investigator - US Department of Interior, Bureau of Land Management. Strategies for genetic management of feral horse populations on public lands in the United States. 1991. Total award to date \$16,007. This is a continuing project and additional funding is expected.
- Principal Investigator - US Department of Interior, National Park Service Grant. Genetic variation and genetic conservation of feral horses: Ocracoke Island. 1 yr., total costs \$1,900. 1991.
- Principal Investigator - Gene Mapping Equipment, University of Kentucky Equipment Program. Total costs \$11,940. 1993.
- Co-Principal Investigator - Grayson-Jockey Club Research Foundation. Gene map of the horse. E.F. Bailey, Principal investigator 3 yr. Total direct costs \$87,412. 1994.
- Principal Investigator - United Professional Horseman's Association grant. Genetic basis of *Epitheliogenesis imperfecta* in the horse. Total costs \$4,500. 1995.
- Principal Investigator - National Research Council, Collaboration in Basic Science and Engineering project development grant. Genetics of the Yakut horse. Total costs \$2,000. 1995. To support travel of Prof. T. Tikhonov from Novosibirsk to Lexington.
- Co-Principal Investigator - Department of the Interior, National Biological Service research grant. Dr. F.J. Singer co-principal investigator. Determining effective population sizes under different management scenarios for the Pryor Mountains wild horses. 2 yr. Total costs \$11,375. 1995.
- Principal Investigator - Department of the Interior, Bureau of Land Management contract. Genetic analysis of feral horses of the San Juan and White River resource areas of Colorado. 1 yr. Total costs \$2,825. 1995.
- Principal Investigator - US Department of Interior, National Park Service Contract. Genetic analysis of the Cumberland Island and Cape Lookout National Seashore feral horses. 1 yr. Total costs \$4,750. 1995.

- Principal Investigator - Belgian Draft Horse Corporation of America Zrant. Genetic basis of *Epitheliogenesis imperfecta* in the horse. 1 yr. Total costs \$6,200. 1996.
- Co-Principal Investigator - Fundacion Fondo De Investigacion Agropecuaria, Chile grant. Genetic mapping of the alpaca. 3 yr. Total costs \$282,000. 1996. Conducted in collaboration with INIA, Chile.
- Principal Investigator - Morris Animal Foundation. Synteny mapping of coding genes in New World Camelids. 2 yr. Total costs \$57,000. 1998.
- Principal Investigator – The Jockey Club. Computer simulation studies of the potential genetic effect of artificial insemination on the gene pool of the Thoroughbred horse. 3 month. Total costs \$2,300.00. 1998.
- Principal Investigator – The Jockey Club Information Center. Development of SNP genetic markers in the horse. 6 month. Total costs \$16,000.00. 1999.
- Principal Investigator- The Belgian Draft Horse Corporation. Epitheliogenesis imperfecta in the Belgain Draft Horse. 2yr. Total costs \$30,000.00. 2001.
- Co-Principal Investigator- American Livestock Breeds Conservancy. Genetics of Ossabaw Island feral donkeys. 2yr. Total costs \$850.00. 2001.
- Principal Investigator- American Saddlebred Horse Association. Epitheliogenesis imperfecta in the Saddlebred. 2yr. Total cost \$10,000.00. 2002.
- Principal Investigator- Peruvian Paso Research Foundation. Genetics of DSLD. 2yr. Total costs \$20,000.00. 2002.
- Principal Investigator- Panoz Family Foundation.. A study to identify the gene or genes that control the curly coat of the horse. 2yr. Total costs \$5,000.00. 2002.
- Principal Investigator- Bureau of Land Management (as subcontractor through Colorado State University). Genetic variation in feral horse and burro herds. 3yrs. Total cost for 2002 \$35,000.00.
- Principal Investigator- United States Trotting Association. An analysis of genetic variation in the Standardbred horse. 1yr. Total costs \$27,325.00 2003.
- Principal Investigator- Peruvian Paso Breeders Association. The genetic basis of Degenerative Suspensory Ligament Demitis in the Peruvian Paso horse. 3yr. Total cost \$300,000.00. 2003-2005.
- Principal Investigator- U.S. Dept. of the Interior, Bureau of Land Management. Analysis of Genetic variation in feral horse and burro herds. 1yrs. Total cost \$27,000.00. 2004-2005.

CONTRACTS:

- Principal Investigator - The Jockey Club, Blood Typing Service Contract. 1987-present. Total costs to date \$4,537,551.
- Principal Investigator - United States Trotting Association, Blood Typing Service Contract. 1987-present. Total costs to date \$3,076,471.
- Principal Investigator - American Saddlebred Horse Association, Blood Typing Service Contract. 1987-present. Total costs to date \$1,817,305.
- Principal Investigator - Pure Puerto Rican Paso Fino Federation of America, Blood Typing Service Contract. 1989-present. Total costs to date \$620.

- Principal Investigator - Jamaican Racing Commission, Blood Typing Service Contract. 1989-present. Total costs to date \$204,482.
- Principal Investigator - American Hackney Horse Society, Blood Typing Service Contract. 1989-present. Total costs to date \$6,293.
- Principal Investigator - Mountain Pleasure Horse Association, Blood Typing Service Contract. 1989-present. Total costs to date \$45,446.
- Principal Investigator - Haflinger Registry of North America, Blood Typing Service Contract. 1990-present. Total costs to date \$28,830.
- Principal Investigator - North American Shagya Society, Blood Typing Service Contract. 1990-present. Total costs to date \$1,767.
- Principal Investigator - American Suffolk Horse Association, Blood Typing Service Contract. 1990-present. Total costs to date \$6,129.
- Principal Investigator - Rocky Mountain Horse Association, Blood Typing Service Contract. 1991-present. Total costs to date \$259,942.
- Principal Investigator - Jockey Club de Peru, Blood Typing Service Contract. 1991-present. Total costs to date \$14,353.
- Principal Investigator - Instituto Nacional de Hipodromas (Stud Book de Venezuela), Blood Typing Service Contract. 1991-present. Total costs to date \$494,326.
- Principal Investigator - Stud Book de Columbia, Blood Typing Service Contract. 1992-present. Total costs to date \$49,848.
- Principal Investigator - Akhal-Teke Association of America, Blood Typing Service Contract. 1992-present. Total costs to date \$2,356.
- Principal Investigator - Friesian Horse Association of North America, Blood Typing Service Contract. 1992-present. Total costs to date \$23,755.
- Principal Investigator - North American Single-Footing Horse Association, Blood Typing Service Contract. 1992-present. Total costs to date \$124.
- Principal Investigator - Swedish Gotland Breeders Association, Blood Typing Service Contract. 1992-present. Total costs to date \$775.
- Principal Investigator - Lippizan Association of North America, Blood Typing Service Contract. 1993-present. Total costs to date \$9,703.
- Principal Investigator - Tiger Horse Association, Inc., Blood Typing Service Contract. 1993-present. Total costs to date \$496.
- Principal Investigator - The Caspian Horse Society of the Americas, Blood Typing Service Contract. 1995-present. Total costs to date \$4,681.
- Principal Investigator - Stud Book de Dominican Republic, Blood Typing Service Contract. 1995-present. Total costs to date \$1,147.
- Principal Investigator - Hipodromo Presidente Remon (Stud Book de Panama), Blood Typing Service Contract. 1991-present. Total costs to date \$11,315.
- Principal Investigator - Stud Book de Costa Rica, Blood Typing Service Contract. 1992-present. Total costs to date \$744.
- Principal Investigator - Stud Book de Guatemala, Blood Typing Service Contract. 1996-present. Total costs to date \$496.
- Principal Investigator - Pintabian Horse Registry, Blood Typing Service Contract. 1996-present. Total costs to date \$496.

- Principal Investigator - National Racking Horse Association, Blood Typing Service Contract. 1996-present. Total costs to date \$837.
- Principal Investigator - Irish Draught Horse Society of North America, Blood Typing Service Contract. 1995-present. Total Costs to date \$14,544.
- Principal Investigator – Kentucky Mountain Saddle Horse Association, Blood Typing Service Contract. 1997-present. Total Costs to date \$59,985.
- Principal Investigator – American Shetland Pony Club, DNA Parentage Testing Service Contract. 1997-present. Total Costs to date \$2,700.
- Principal Investigator – Criadores De Caballos Deportivos Mexicanos, A.C. , DNA Parentage Testing Service Contract. 1997-present. Total Costs to date \$15,248.
- Principal Investigator - The Tennessee Walking Horse Breeders and Exhibitors Association, Blood Typing Contract. 1997-present. Total costs to date \$1,134,401.
- Principal Investigator – Tiger Horse Registry, Blood Typing Service Contract. 1998-present. Total Costs to date \$279.
- Principal Investigator – American Haflinger Registry, Blood Typing and DNA Typing Service Contract. 1998-present. Total Costs to date \$110,749.
- Principal Investigator – North American Baudet Du Poitou Registry, DNA Parentage Testing Service Contract. 1999-present. Total Costs to date \$540.
- Principal Investigator – Archival Morgan Record, DNA Parentage Testing Service Contract. 1999-present. Total Costs to date \$432.
- Principal Investigator – National Show Horse Registry, Blood Typing and DNA typing Service Contract. 2002-present. Total Costs to date \$11,778.
- Principal Investigator – American Dartmoor Pony Association, DNA Typing Service Contract. 2002-present. Total Costs to date \$270.
- Principal Investigator – Exmoor Pony Association International, DNA Typing Service Contract. 2002-present. Total Costs to date \$135.
- Principal Investigator – National Miniature Donkey Association - DNA Typing Service Contract. 2002-present. Total Costs to date \$1,647.
- Principal Investigator - Dartmoor Pony Society of America, DNA Typing Service Contract. 2002-present. Total Costs to date \$297.
- Principal Investigator – American Cream Draft Horse Association, DNA Typing Service Contract. 2002-present. Total Costs to date \$135.
- Principal Investigator – North American Caspian Society, DNA Typing Service Contract. 2003-present. Total Costs to date \$1,026.
- Principal Investigator – Gypsy Cob and Drum Horse Association, DNA Typing Service Contract. 2003-present. Total Costs to date \$3,888.
- Principal Investigator – New Forest Pony Association and Registry, DNA Typing Service Contract. 2003-present. Total Costs to date \$432.
- Principal Investigator – Gypsy Cob Society of America, DNA Typing Service Contract. 2003-present. Total Costs to date \$4,158.
- Principal Investigator – Gypsy Vanner Horse Society, DNA Typing Service Contract. 2003-present. Total Costs to date \$5,292.
- Principal Investigator – Dartmoor Pony Registry, DNA Typing Service Contract. 2003-present. Total Costs to date \$108.

- Principal Investigator – International Curly Horse Organization, DNA Typing Service Contract. 2004-present. Total Costs to date \$1,485.
- Principal Investigator – American Shaya Arabian Verband, Inc., DNA Typing Service Contract. 2004-present. Total Costs to date \$837.
- Principal Investigator – Missouri Fox Trotter Horse Breeders Association, DNA Typing Service Contract. 2004-present. Total Costs to date \$5,697.
- Principal Investigator – Freisians of America, DNA Typing Service Contract. 2004-present. Total Costs to date \$405.
- Principal Investigator – International Foundation Morgan Horse Association, DNA Typing Service Contract. 2004-present. Total Costs to date \$27.
- Principal Investigator – Irish Draught Horse Society of Canada, DNA Typing Service Contract. 2004-present. Total Costs to date \$783.
- Principal Investigator – Canadian Morgan Horse Association, DNA Typing Service Contract. 2004-present. Total Costs to date \$1,700.
- Principal Investigator – Sulphur Horse Registry, DNA Typing Service Contract. 2004-present. Total Costs to date \$270.
- Principal Investigator – Celtic Warmblood Registry, DNA Typing Service Contract. 2004-present. Total Costs to date \$189.

PROFESSIONAL AND HONORARY SOCIETIES:

- American Association for the Advancement of Science
 Society for the Study of Evolution
 Society of Systematic Biology
 Phi Sigma
 Sigma Xi
 American Society of Mammalogists
 International Society for Animal Genetics - Elected to Standing Committee for Genetics of the Horse, 1988 and 1992 and Chairman of Committee 2004. Elected to Standing Committee for Genetics of Deer, 1992 - present ISAG/FAO Domestic Animal Relationships Programme advisory committee. 1995-present. Elected to Standing Committee of Thoroughbred Horses 1994 and Chairman of Committee 1996. Elected to Standing Committee for Domestic Animal Genetic Diversity 1996 - present.
- American Genetic Association
 Society of Conservation Biologists
 Society for Molecular Biology and Evolution

GRADUATE STUDENT TRAINING:

Advisory Committees

- John Langemeier, Masters Degree 1991. University of Kentucky.

Judith A. King, Masters Degree 1992. University of North Texas. (I actually supervised Ms. King's thesis research although her official major professor was Dr. Earl Zimmerman of UNT).

Teri L. Lear, Ph.D. Degree 1997. University of Kentucky.

Darrilyn G. Fraser, Ph.D. Degree 1998. University of Kentucky.

Major Professor

Louis D. Lieto, Ph.D. student 1996-2001. Degree 2001. Dissertation Title: Characterization of Epitheliogenesis Imperfecta in *Equus caballus*. University of Kentucky.

John E. Eberth, Masters student 1996-1999. University of Kentucky.

Rebecca R. Terry, Ph.D. student 1997-2001. Degree 2001. Dissertation Title: Investigations of candidate genes for appaloosa coat color in horses. University of Kentucky.

Andrew R. Flannery, Masters student 1997-1999. Degree 1999. Thesis Title : A study utilizing the DNA sequence variation of the mitochondrial control region to elucidate the domestication pattern of the horse. University of Kentucky.

Charles R. Toma, Masters student 2000-2002. University of Kentucky.

Diane Strong, Masters student 2003-2006. Degree 2006. Thesis title: The use of a whole genome scan to find a genetic marker for Degenerative Suspensory Ligament Desmitis in the Peruvian Paso horse. University of Kentucky.

PAPERS PRESENTED:

Biochemical genetics and evolution in the ground squirrel subgenus *Ictidomys*. Southwestern Association of Naturalists, Univ. Oklahoma Biol. Sta., Oklahoma. 1975.

Genetic variation in the fossorial rodent *Geomys bursarius*. Southwestern Association of Naturalists, U. New Mexico, Albuquerque, New Mexico. 1977.

Genetic variability and fetal development in the white-tailed deer. S.E. Deer Study Group, Stephen F. Austin St. Univ., Nacogdoches, Texas. 1979.

Relationship between genic heterozygosity and fetal growth rate in the white-tailed deer (*Odocoileus virginianus*). Amer. Soc. Mammalogists, Univ. Rhode Island, Kingston, Rhode Island. 1980.

Influence of genetic variability and maternal factors on fetal growth rate in white-tailed deer. S.E. Ecological Genetics Group, Blacksburg, Virginia. 1980.

Relationships between the hybridizing ground squirrel species *Spermophilus mexicanus* and *S. tridecemlineatus*. Amer. Soc. Mammalogists, Miami Univ., Oxford, Ohio. 1981.

- Genetic variability and antler growth in a natural population of white-tailed deer. International Symposium on Antler Growth and Development in Cervids. Texas A & I Univ., Kingsville, Texas. September 24, 1981, presented by Dr. M.H. Smith.
- Antler characteristics and genetics in a South Carolina white-tailed deer herd. S.E. Deer Study Group, Charleston, South Carolina. 1982.
- Fat loss during pregnancy in the white-tailed deer. Amer. Soc. Mammalogists. Snowbird, Utah. 1982.
- Changes in levels of stored body fat of male white-tailed deer during the breeding season. Amer. Soc. Mammalogists, Snowbird, Utah. Presented by P.E. Jones. 1982.
- Genetic variability in natural populations. A workshop at Man and the Biosphere International Symposium on the Application of genetics to the Management of Wild Plant and Animal Populations. Washington, D.C., August, 1982.
- Comparison of genic similarity and genealogical kinship in pedigreed horses. Texas Genetics Society, Dallas, Texas. 1984.
- Inbreeding and genetic variability in Standardbred horses. Society for the Study of Evolution, Crested Butte, Colorado. 1984.
- Genetic variability, inbreeding and reproductive performance in Standardbred horses. Invited paper. Workshop on Genetic Management of Captive Populations. Conservation and Research Center, National Zoological Park, Front Royal, Virginia. 1984.
- Selection in captive populations. Panel discussion. Workshop on Genetic Management of Captive Populations. Conservation and research Center, National Zoological Park, Front Royal, Virginia. 1984.
- Genic differentiation within American Standardbred horses associated with gait. Invited poster. Fourth International Theriological Congress. Edmonton, Alberta, Canada. 1985.
- Demographic and genetic relationships in natural populations of mammals. Invited paper. Fourth International Theriological Congress. Edmonton, Alberta, Canada. 1985.
- Genetic variability and fertility in Standardbred horses. Invited seminar. Southwest Foundation for Biomedical Research, San Antonio, Texas. 1986.
- Genetic management of captive populations. Invited workshop participant. American Association of Zoological Parks and Aquariums Symposium, Omaha, Nebraska. 1986.

Genetic differentiation within American Standardbred horses associated with gait. International Conference on Animal Blood Groups and Biochemical Polymorphisms, XXth, Helsinki, Finland, 1986.

Late effects of irradiation on immunologic parameters in rhesus monkeys. American Society of Primatologists, Austin, Texas. 1986. Presented by A.M. Braun.

Genetic differentiation associated with gait within American Standardbred horses. Pymatuning Genetics Retreat, Pymatuning, Pennsylvania. 1986.

Genetic differentiation associated with gait within American Standardbred horses. Isozyme Conference, 20th, St. Croix, US Virgin Islands. 1986. Presented by J.W. MacCluer.

Analysis of electromorph frequency differences among subgroups by use of the wrighted separation index. Society for the Study of Evolution, Bozeman, Montana. 1987.

Genetics of barrier island horses. XXIst International Conference on Animal Blood Groups and Biochemical Polymorphisms. Torino, Italy. 1988.

Examination of the protease inhibitor system in *Equus asinus* using 1-D acid PAGE. XXIst International Conference on Animal Blood Groups and Biochemical Polymorphisms. Torino, Italy. 1988.

Association of fluctuating asymmetry with age in male white-tailed deer. XVIth International Congress of Genetics. Toronto, Canada. 1988.

Late effects of space radiation on immunocompetence in rhesus monkeys. Brooks Air Force Base Symposium. San Antonio, Texas. 1989, presented by Dr. W.H. Stone.

Detection of a new allele at the equine *EST* locus by an improved IEF technique. International Bloodtyping Standardization Workshop. Brisbane, Australia. 1989.

Founder effect and genetic variation in the Rocky Mountain Horse. International Equine Bloodtyping Standardization Workshop. Brisbane, Australia. 1989.

Genetics management of feral horses on four eastern U.S. barrier islands. Amer. Soc. Mammalogist. Frostberg, MD 1990. Presented by Robin B. Goodloe.

A *bc* phenogroup in the *Q* blood group system in horses of feral origin. International Conf. on Animal Genetics. East Lansing, MI 1990.

Genetics of horses of feral origin in North America. International Conf. on Animal Genetics, East Lansing, MI 1990.

A new *PGD* variant from North American horses of feral origin. International Conf. on Animal Genetics. East Lansing, MI 1990.

Variability of Mannosephosphate isomerase (*MPI*) from hemolysate in 14 horse breeds. International Conf. on Anim. Genet. East Lansing, MI, 1990.

Inbreeding, reproductive success, and genetic variation in the Sorraia horse of Portugal. International Conf. on Animal Genetics. East Lansing, MI, 1990. Presented by M.M. Oom.

Strategies for genetic management of feral horse populations on public lands. Wild Horse and Burro Research Forum (Nevada Commission for the Preservation of Wild Horses). Reno, NV 1991.

Genetic conservation of minor breeds. Invited presentation. American Minor Breeds Conservancy Annual Meeting. Louisville, KY 1991.

Genetics of feral horses in North America. Invited presentation. Spanish Mustang Coalition biannual meeting. Reno, NV 1992.

Genetics of feral horses in North America. Invited seminar. Department of Veterinary Science, University of Kentucky, Lexington, KY 1992.

Genetic variation and genetic conservation of a rare breed: The Caspian pony. International Conf. on Animal Genetics. Interlaken, Switzerland 1992.

Genetic analysis of the Chilote horse from the island of Chiloe, Chile. XIII Pan-American Congress of Veterinary Science. Santiago, Chile. 1992.

The Banker Horse Genetic Research Program. Invited Presentation. National Park Service and Eastern National Park & Monument Association Symposium "Roanoke Decoded". Manteo, NC. 1993.

Senteny mapping in the horse. International Conference of Comparative Gene Mapping in Terrestrial and Aquatic Vertebrates. Oslo, Norway. 1994.

Genetic variation and population size in the horse. Invited seminar. Department of Zoology, University of Leicester, Leicester, United Kingdom. 1994.

Genetic analysis of horse breeds derived from the Tarpan. International Conf. on Animal Genetics. Prague, Czech Republic. 1994. Presented by G. Cholewinski.

Genetic variation and population size of feral horse herds. International Conf. on Animal Genetics. Prague, Czech Republic. 1994.

The genetic variation of an endangered breed: the Sorraia horse. International Conf. on Animal Genetics. Prague, Czech Republic. 1994. Presented by M.M. Oom.

Phylogenetic studies of Equids using *RAPD* markers. International Conf. on Animal Genetics. Prague, Czech Republic. 1994. Presented by T.L. Lear.

Genetic markers and breed conservation. Invited presentation. The Third Global Conference on Conservation of Domestic Animal Genetic Resources. Kingston, Ontario, Canada. 1994.

Gene mapping the horse using microsatellites and a somatic cell hybrid panel. Hereditary Diseases of the Horse, International Congress. Interlake, Switzerland. 1994. Presented by E.F. Bailey.

Identification and synteny mapping of equine microsatellite DNA markers. Beltsville Symposium XX, Biotechnology's Role in the Genetic Improvement of Farm Animals. Beltsville, MA. 1995. Presented by L. Coogle.

Genetic diversity in the horse (*Equus caballus*). Fifth Congress of the European Society for Evolutionary Biology. Edinburgh, Scotland. 1995.

Genetic analysis of the Croatia Trakehner and Posivina horse breeds. Invited presentation. "EQUUS 95" First International Symposium on Horse Breeding in Croatia. Rovinj, Croatia. 1995. Presented by M. Kovac.

Identifying breeds as genetic resources. Invited presentation. The American Livestock Breeds Conservancy Workshop and Annual Conference. Lexington, KY. 1996.

Genetic analysis of the Exmoor pony. International Conference on Animal Genetics. Tours, France. 1996.

Preliminary study of genetic variation of a feral pony from Portugal: The Garrano. International Conference on Animal Genetics. Tours, France. 1996. Presented by M. Oom.

Genetic analysis of the Yakut horse of Siberia, Russia. International Conference on Animal Genetics. Tours, France. 1996.

Equine gene mapping: Synteny mapping DNA markers. International Conference on Animal Genetics. Tours, France. 1996. Presented by K. Graves.

Efficacy of comparative anchor tagged sites (CATS) primers for synteny mapping the horse. International Conference on Animal Genetics. Tours, France. 1996. Presented by N. Raney.

Gene mapping of mammals. Invited Seminar. Instituto de Investigaciones Agropecuarias, Santiago, Chile. 1996.

Horse genes and some of the stories they can tell. Departmental Seminar, Dept. Vet. Sci., Univ. Kentucky, Lexington, KY. 1996

Genetic diversity in the domestic horse (*Equus caballus*). Plant & Animal Genome V, International Conference on the Status of Plant and Animal Genome Research, San Diego, CA 1997.

Polymorphism at different types of loci in a subdivided population of domestic horse. 9th International Congress on Genes, Gene Families, and Isozymes, San Antonio, TX 1997.

Isolation of highly polymorphic microsatellites in alpaca for genomic characterization of South American Camelids. Sociedad de Genetica de Chile, Puerta Varas, Chile. 1997. Presented by V. Obreque.

Genetic parameters of native Yakut horse population and the phylogenesis of *Equus caballus* L. 48th Annual Meeting of the European Association for Animal Production, Vienna, Austria 1997. Presented by V. Tikhonov.

Animal genetics: Applications based on genomic studies. Invited Seminar. Instituto de Investigaciones Agropecuarias, Santiago, Chile. 1997.

Isolation of highly polymorphic microsatellites in alpaca for genome characterization of South American Camelids. Plant and Animal Genome VI. International Conference on the Status of Plant and Animal Genome Research, San Diego, CA 1998. Presented by V. Obreque.

Synteny mapping of the horse using a heterohybridoma panel. Plant and Animal Genome VI. International Conference on the Status of Plant and Animal Genome Research, San Diego, CA. 1998.

Genetic variation in horses. Banbury Conference. Cold Spring Harbor Laboratory. Banbury Center. NY, 1998.

Advances in the development of a panel of microsatellites in alpaca. XXVI International Conference on Animal Genetics. Auckland, New Zealand. 1998. Presented by R. Mancilla.

Genetic differences among South American camelids as determined by anonymous polymorphic markers. XXVI International Conference on Animal Genetics. Auckland, New Zealand. 1998. Presented by P. Hinrichsen.

Comparison of genetic variation at different types of loci within a subdivided population of domestic horse. XXVI International Conference on Animal Genetics. Auckland, New Zealand. 1998.

Genetic analysis of major sire lines within the Silesian horse breed from Poland. XXVI International Conference on Animal Genetics. Auckland, New Zealand. 1998. Presented by G. Cholewinski.

Genetic variation in the rare donkey breed, Baudet de Poitou. XXVI International Conference on Animal Genetics. Auckland, New Zealand. 1998. Presented by M. Ketchum.

Report of the International Equine Gene Mapping Workshop: First linkage map. XXVI International Conference on Animal Genetics. Auckland, New Zealand. 1998. Presented by E. Bailey.

Molecular characterization and genetic analysis of black coat color in the horse. XXVI International Conference on Animal Genetics. Auckland, New Zealand. 1998. Presented by L. Lieto.

Blood marker gene frequencies in Silesian horse. The 13th Symposium of the Polish Genetics Society. Warszawa, Poland. 1998. Presented by G. Cholewinsky.

Synteny mapping of the horse using universal mammalian sequence tagged sites of coding genes and a heterohybridoma panel. Plant and Animal Genome VII. San Diego, CA. 1999. Presented by R. Terry.

Genetic variation in horse populations. Invited Presentation. Bureau of Land Management Wild Horse and Burro Population Viability Forum. Ft. Collins, CO. 1999.

Synteny mapping of coding genes in New World Camelids. Invited Presentation. Seminario Internacional Genetica de Camelidos Sudamericanos: Estudio Moleculares Y Citogeneticos. Santiago, Chile. 1999.

Population genetics of domestic equids. Invited Workshop Presentation. Plant and Animal Genome VIII. San Diego, CA. 2000.

Characterization of expressed sequence tags generated from skin cDNA clones of *Equus caballus* by 5 prime sequencing. Plant and Animal Genome VIII. San Diego, CA. 2000. Presented by L. Lieto.

DNA and conservation. Invited Presentation. American Livestock Breeds Conservancy Annual Conference. Colonial Williamsburg, VA. 2000.

Population genetics of mtDNA D-loop variation of Cheju Native Horse. Korean Society of Animal Science Technology. Korea. 2000. Presented by Y. Yang.

Genetic differentiation within a new Polish horse breed. XXVII International Conference of Animal Genetics. Minneapolis, MN. 2000. Presented by G. Cholewinski.

Genetic variation in seven native horse breeds from Greece. XXVII International Conference of Animal Genetics. Minneapolis, MN. 2000.

Rejection of *KIT* as the gene responsible for appaloosa coat color spotting pattern in horses. XXVII International Conference of Animal Genetics. Minneapolis, MN. 2000. Presented by R. Terry.

Characterization of Epitheliogenesis Imperfecta in *Equus caballus*. XXVII International Conference of Animal Genetics. Minneapolis, MN. 2000. Presented by L. Lieto.

Characterization of Epitheliogenesis Imperfecta in the horse. Plant and Animal Genome IX. San Diego, CA. 2001.

Genetic variation in the domestic horse. Invited Seminar. Savannah River Ecology Laboratory, Aiken SC. 2001.

Linkage disequilibrium analysis of Epithelium Imperfecta in *Equus caballus*. IVth International Horse Gene Mapping Workshop. Brisbane, Australia. 2001.

Investigation of MITF as the candidate gene for appaloosa spotting in horses. IVth International Horse Gene Mapping Workshop. Brisbane, Australia. 2001. Presented by R. Terry.

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Genetic analysis of horses from the Pryor Mountain Wild Horse Reserve. 1992. Report
for National Park Service, Bighorn Canyon National Recreation Area, and Bureau of Land
Management, Billings Resource Area, Montana.

Genetic marker analysis of the Theodore Roosevelt National Park feral horse herd. 1992.
Report for National Park Service, Theodore Roosevelt National Park, Medora, North
Dakota.

Genetic marker analysis of the Fifteenmile herd - Wyoming. 1992. Report for Bureau of
Land Management, Worland District, Wyoming.

A genetic analysis of the horses of the Chloride herd - Utah. 1992. Report for Bureau of
Land Management, Cedar City District, Utah.

Genetic analysis of horses from the Bordo Atravesado herd area, New Mexico. 1993.
Report for Bureau of Land Management, Socorro Resource Area, New Mexico.

Genetic marker analysis of the Little Bookcliffs, Colorado, wild horse herd. 1993. Report
for Bureau of Land Management, Grand Junction Resource Area, Colorado.

Genetic analysis of the Barcus Creek wild horse population. 1993. Report for Bureau of
Land management, White River Resource Area, Colorado.

Genetic marker analysis of the feral horse herd from the McCullough Peak herd
management area, Wyoming. 1993. Report for Bureau of Land Management, Cody
Resource Area, Wyoming.

Genetic analysis of the feral horse populations of the outer banks. 1993. Report for
National Park Service, Cape Hatteras National Seashore, North Carolina.

Genetic variation in the wild horse herd of the Theodore Roosevelt National Park. 1995.
Report for National Park Service, Theodore Roosevelt National Park, Medora, North
Dakota.

Genetic analysis of the feral horses of the White River Resource area of Colorado. 1995. Report for Bureau of Land Management, White River Resource District, Colorado.

Genetic analysis of the Cape Lookout National Seashore Feral Horse herd. 1997. Report for National Park Service, Cape Lookout National Seashore, Harkers Island, North Carolina.

Genetic analysis of two feral horse herds in the Cedar City management area of Utah. 1997. Report for Bureau of Land Management, Cedar City District, Utah.

Genetic analysis of the Sand Wash feral horse herd of the Little Snake resource area of Colorado. 1997. Report for Bureau of Land Management, White River Resource District, Colorado.

Analysis of genetic variation in the Pryor Mountain Wild Horse Herd. 1999. Report for Bureau of Land Management, Billings Resource District, Montana.

Over 50 additional BLM reports.

CURRENT PROJECTS:

Heredity basis of equine congenital defects.

Interrelationships of inbreeding, genetic polymorphism, and reproductive performance in horses.

Population genetics of feral horses.

Comparative aspects of genic variation in horses under human selection and under natural selection.

Genetic aspects of captivity. Management of genetic polymorphism in small populations.

Genetic relationship among domestic horse breeds.

Gene mapping of the horse.

Gene mapping of the alpaca.