

BIOGRAPHICAL SKETCH

NAME	DERR, James N.		POSITION TITLE	Associate Professor
EDUCATION/TRAINING				
INSTITUTION AND LOCATION		DEGREE	YEAR CONFERRED	FIELD OF STUDY
Cameron University		B.S.	1980	Biology
Sul Ross State University		M.S.	1982	Zoology
Texas A&M University		Ph.D.	1990	Genetics

Professional Experience

1985-1987	Graduate Teaching Assistant, WFSC, TAMU
1987-1989	Tom Slick Research Fellow, WFSC, TAMU
1989-1990	Staff Research Assistant, WFSC, TAMU
1990-1993	Post-Doc Research Associate, ANSC, TAMU
1993-1999	Assistant Professor, VTPB, TAMU
1995-	Director, DNA Technologies Laboratory, VTPB, TAMU
1999-	Board of Directors, Texas Genetics Society
1999-	Associate Professor, VTPB, TAMU
2000-2002	Chair, Graduate Faculty of Genetics, TAMU
2001-2003	President-Elect and President, Texas Genetics Society

Honors and Awards

Phi Kappa Phi Distinguished Alumnus Award, Cameron University, 2000.
 Outstanding Doctoral Student, Department of Wildlife and Fisheries Sciences, TAMU, 1987-1988.
 Outstanding Student in Training, The Texas Genetics Society. April, 1987, College Station, Texas.
 Recipient of the Tom Slick Research Fellowship, by the College of Agriculture, TAMU 1987-1988.
 President, Association of Graduate Wildlife and Fisheries Scientists, TAMU, 1985-1986.

Publications in the last 5 years and earlier pertinent publications.

- Ward, T.J., R. H. Honeycutt and J. N. Derr. 1997.** The pattern of nucleotide sequence evolution at Kappa-Casein loci provides evidence of positive selection. *Genetics* 147:1863-1872
- Rooney, A.P., D.B. Merritt and J.N. Derr. 1999.** Microsatellite diversity in captive bottlenose dolphins (*Tursiops truncatus*). *Journal of Heredity* 90:228-331.
- Ward, T.J., J. P. Bielawski, S. K. Davis, J. W. Templeton, and J. N. Derr. 1999.** Identification of domestic cattle hybrids in wild cattle and bison species: A general approach using mtDNA markers and the parametric bootstrap. *Animal Conservation* 2:51-57.
- Rooney, A.P. R.L. Honeycutt, S.K. Davis and J.N. Derr. 1999.** Evaluating a putative bottleneck in a population of bowhead whales from patterns of microsatellite diversity and genomic disequilibria. *Journal of Molecular Evolution* 49:682-690.
- Green, L.D., J.N.Derr and A. Knight. 2000.** Mitochondrial DNA affinities of the peoples of North-Central Mexico. *The American Journal of Human Genetics* 66:989-998.
- Schnabel, R.D., T.J. Ward and J.N. Derr. 2000.** Validation of 15 microsatellites for parentage testing in North American bison, *Bison bison* L. and Domestic cattle. *Animal Genetics* 31:360-366.
- Ward, T.J., L.C. Skow, D.S. Gallagher, R.D. Schnabel, C.E. Kolinda, Chad Nall, and J.N. Derr. 2000.** Differential introgression of uniparentally-inherited markers in bison populations with hybrid ancestries. *Animal genetics* 32:89-91.
- Rooney, A.P., R.L. Honeycutt and J.N. Derr. 2001.** Historical Demographics patterns of bowhead whales inferred from genetic polymorphism data. *Evolution*, 55(8):1678-1685.
- Arriaga, J.M., N.D. Cohen, J.N. Derr, M.K. Chaffin, and R. J. Martens. 2002.** Detection of *Rhodococcus equi* by polymerase chain reaction using novel, non-proprietary primers. *Journal of Veterinary Diagnostic Investigation* 14:347-353.
- Hansen, C., J.N.B. Shrestha, R.J. Parker, G.H. Crow, P.J. McAlpine and J.N. Derr. 2002.** Genetic diversity among Canadienne, Brown Swiss, Holstein and Jersey cattle based on 15 microsatellite markers. *Genome*. 45:862-870.
- Hansen, C., J.N.B. Shrestha, R.J. Parker, G.H. Crow, P.J. McAlpine and J.N. Derr. 2003.** Genetic diversity among Canadienne, Brown Swiss, Holstein and Jersey cattle based on mitochondrial D-loop sequence variation. *Can. J. Animal Sci.* 83: 39-44.

Seabury, C.M., and J.N. Derr. 2004. Identification of a novel ovine PrP polymorphism and scrapie resistance genotypes for St. Croix White and a related composite breed. *Cytogenetic and Genome Research*. 102: 85-88.

Schnabel, R.D., J.F. Taylor and J.N. Derr. 2004. Development of a linkage map and QTL scan for growth traits in North American bison. *Cytogenetic and Genome Research*. 102:59-64.

Halbert, N., Raudsepp, T., Chowdhary, B., and J.N. Derr. 2004. The legacy of Charles Goodnight: Conservation genetic analysis of the Texas State Bison Herd. *Journal of Mammalogy*. In Press.

Halbert, N.R., W.E. Grant, and J.N. Derr. 2004. Genetic and demographic consequences of importing animals into a small population: A simulation model of the Texas State Bison Herd (U.S.A.). *Ecological Modeling*, In Press.

Grants in the last 5 years.

- 1995-2000 Molecular and population genetics of Colombian Criollo cattle. J.N. Derr, S.K. Davis, J.L. Estrada, F. Ariza, J.E. Ossa, A.R. Linares. A proposal for research submitted to the Director of Biotechnology, COLCIENCIAS, Bogota, Colombia. \$216,000.
- 1996-1998 North American bison as a model for the conservation of megavertebrate populations. J.N. Derr (PI) and J.W. Templeton (Co-PI). Agency: National Science Foundation (NSF). \$120,000.
- 1997-1998 JA Ranch bison genetics. J.N. Derr (PI), T. Ward and J. Templeton. Agency: Texas Parks and Wildlife Department, Austin, TX.. \$10,000.
- 1997-1998 A Molecular Genetic Evaluation of the Bering/Chukchi/Beaufort Seas Stock of Bowhead Whales (*Balaena mysticetus*): An Estimation of Genetic Diversity and Extent of the Potential Recent Bottleneck. J. N. Derr (Principal Investigator) and Alejandro P. Rooney. Department of Wildlife Management, North Slope Borough, Barrow, AK. \$56,348.
- 1997-1998 Comparative molecular and biological characterization of bursal anti-steroidogenic peptide (BASP): Role in reproductive and immune system disease. B. Hargis (PI) T. Porter and J.N. Derr. Agency: CVM Formula Animal Health TAMU. \$39,600.
- 1997-1999 *Rhodococcus equi* foal pneumonia: Molecular epidemiology, pathogenesis and diagnosis. R. Martens (PI), N. Cohen, K. Chaffin and J.N. Derr. Agency: American Quarter Horse Association. \$57,852.
- 1998-2002 Center for environmental and rural health. Steve Safe, Kenneth Ramos, et al. Agency: National Institutes of Health (NIH-NIEHS) Special Emphasis Panel. \$2,000,000. 1998 - 1999 \$32,000 (Derr).
- 1999 Comparative genomics. J. Womack, L. Skow. G. Lees and J. Derr. College of Veterinary Medicine Signature program Enhancement Initiative. \$40,000.
- 1999 Acquisition of real time quantitative PCR capabilities for the CVM. D. Kochevar et.al. College of Veterinary Medicine Signature program Enhancement Initiative. \$36,475.
- 2000-2003 College of Veterinary Medicine Support for the Interdisciplinary Faculty of Genetics. J. Derr. College of Veterinary Medicine Signature program Enhancement Initiative. \$15,000.
- 2000-2003 The Application of Conservation Genetics to the Long-term Management of Bison in Five National Parks. J.N. Derr and J.W. Templeton. Agency: Department of Interior, US Geological Service and the National Park Service. \$285,000.
- 2002 - 2003 Role of the Ft. Niobrara Wildlife Refuge and Sullys Hill Wildlife Preserve in the Long-Term Management of Federal Bison Herds. J.N. Derr PI and J.W. Templeton. The U.S. Department of the Interior, U.S. Geological Survey & the U.S. Fish and Wildlife Service. Total funding \$53,000.
- 2001 – 2003 Banking Bison Tissue Culture Cells for Cloning of Bison in Case of Catastrophic Loss. The Turner Foundation J.W. Templeton PI. Total funding \$180,000.
- 2004 – 2005 Development of a Genetic Based Breeding Program For The Badlands National Park Bison Herd. The Department of the Interior, U.S. J.N. Derr PI. Total funding \$50,000.

Significant Research

My research involves applying molecular genetic technology to problems involving conservation genetics, population genetics, gene mapping of economically important traits and the genetics of disease resistance in domesticated livestock and wildlife. Over the last few years my laboratory has investigated these issues in North American bison, domestic cattle, domestic goats, humans, bowhead whales and bottlenose dolphins. Graduate students that have completed their studies through my research program have moved on to private corporations, federal agencies and university positions.