

**CURRICULUM VITAE**  
**James N. Derr, Ph.D.**  
**(2019)**

**PRESENT POSITION AND ADDRESS**

Title	Professor
Affiliation	Department of Veterinary Pathobiology, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX 77843-4467
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**EDUCATION**

Degree/Training	Conferring Institution	Field	Year
BS	Cameron University, Lawton, OK	Biology	1980
MS	Sul Ross State University, Alpine, TX	Zoology	1982
Ph.D.	Texas A&M University, College Station, TX	Genetics	1990

**PROFESSIONAL EXPERIENCE AND ACADEMIC APPOINTMENTS AT TEXAS A&M UNIVERSITY**

1985 - 1987	Graduate Teaching Assistant	Genetics
1987 - 1989	Tom Slick Research Fellow	Genetics
1989 - 1990	Staff Research Assistant	Genetics
1990 - 1993	Post-Doc Research Associate	Animal Sciences
1993 - 1999	Assistant Professor	Veterinary Pathobiology
1999 - 2007	Associate Professor	Veterinary Pathobiology
2000 - 2002	Chair - Graduate Faculty of Genetics	Genetics
2007 - Present	Professor	Veterinary Pathobiology

**AWARDS AND HONORS**

**President**, Association of Graduate Wildlife and Fisheries Scientists, TAMU, 1985-1986

**Recipient of the Tom Slick Research Fellowship**, COALS, TAMU, 1987-1988.

**Outstanding Doctoral Student**, WFSC, TAMU, 1987-1988.

**Outstanding Student in Training**, Texas Genetics Society. 1987.

**Phi Kappa Phi Distinguished Alumnus Award**, Cameron University, 2000.

**President**, Texas Genetics Society, (2001-2003).

**Certificate of Recognition**. Outstanding Laboratory Safety Inspection of the Month. Presented by the Environmental Health and Safety, Texas A&M University, September 2011.

**Recognition for Outstanding Service to the Industry** by The Texas Bison Association and the National Bison Association, May 2016.

## **TEACHING EXPERIENCE**

I have taught Biomedical Genetics 320 for over 20 years. Currently I am teaching this course to about 80 students every spring semester on the campus of Texas A&M University in College Station and at the same time through a video link-up to Study Abroad Students in Germany. I also teach a HIGH IMPACT Biomedical Genetics 320 course in Costa Rica each fall semester to 14 TAMU Study Abroad students.

I have team taught Mammalian Genetics 405 with James Womack for over 20 years on the campus of Texas A&M University in College Station. In 2017, I assumed complete responsibility for this course upon Dr. Womack's retirement. Typically, this course includes about 80 students.

For the last 6 years, I have assumed the responsibility of teaching a HIGH IMPACT Study Abroad course entitled "African Wildlife Medicine" in South Africa. This course includes both 1<sup>st</sup> and 2<sup>nd</sup> year Veterinary students as well as graduate and high achieving undergraduates that are destined for a professional program in veterinary medicine.

Currently I have 3 Ph.D. students working in my laboratory and 3 undergraduate student workers. These students enroll in multiple hours of 691, 481 and 485 courses, which I direct.

## **TEACHING EFFORT AT TEXAS A&M UNIVERSITY (1992 – PRESENT)**

### **Undergraduate:**

<b><u>Course Title</u></b>	<b><u>Hr</u></b>	<b><u>%</u></b>	<b><u>Dates</u></b>
GENE 301(honors) General Genetics	4	100%	spring (1992, 93, 95, 03)
GENE/BIMS 320 Biomedical Genetics	3	100%	spring (1995 - present)
GENE/BIMS 320 Biomedical Genetics Costa Rica	3	100%	fall 2016 - 2018
GENE/BIMS 405 Mammalian Genetics	3	25%	fall (1994 - 2016)
GENE/BIMS 405 Mammalian Genetics	3	100%	fall 2017 - present
GENE 481 Undergraduate Research	1 - 3	100%	various - since fall 1994
GENE 485 Undergraduate Problems	1 - 4	100%	various - since fall 1994
GENE 485 African Wildlife Medicine	4 - 6	100%	MayMester 2013 - 2018

### **Professional:**

<b><u>Course Title</u></b>	<b><u>Hr</u></b>	<b><u>%</u></b>	<b><u>Dates</u></b>
VLAM 931 Conservation Medicine	2	5%	fall 00 - 06
VTPB 948 African Wildlife Medicine	4	100%	MayMester 2013 - present
VTPB 948 Wildlife Capture and Handling	2	5%	Fall 2015 - present

### **Graduate:**

<b><u>Course Title</u></b>	<b><u>Hr</u></b>	<b><u>%</u></b>	<b><u>Dates</u></b>
BIMS 689 Conservation Medicine and One Health Program	1	5%	fall 2018
GENE 603 Graduate Genetics	4	100%	fall 94 - 96
GENE 685 Graduate problems	1-4	100%	various semesters

BIOT 601 Biotechnology	5	5%	1 week 2000 - 2008
GENE 691 Graduate Research	1 - 9	100%	94 - present

**CVM - Continuing Education**

African Wildlife Medicine: Chemical Immobilization Course (CIC) in Nelspruit, South Africa, March 2013 and 2014. This course was 40 Continuing Education (CE) credit hours.

**Graduate Students and Resident Advisory Committees**

(In 2018, I agreed to participate on the graduate committee of my 100<sup>th</sup> graduate student.)

**Ph.D.**

<b>Sam Stroupe</b>	<b>BIMS (Genetics)</b>	<b>Chair</b>
<b>Caitlin J. Curry</b>	<b>VTPB (Genetics)</b>	<b>Chair</b>
<b>David Forgacs</b>	<b>VTPB (Genetics)</b>	<b>Chair</b>
<b>Joseph Modarelli</b>	<b>BIMS (Genetics)</b>	<b>Co-Chair (graduated Dec. 2018)</b>
<b>Lauren Dobson</b>	<b>VTPB (Genetics)</b>	<b>Chair (graduated Aug. 2015)</b>
<b>Christopher M. Seabury</b>	<b>VTPB (Genetics)</b>	<b>Chair (graduated Dec. 2004)</b>
<b>Natalie D. Halbert</b>	<b>VTPB (Genetics)</b>	<b>Chair (graduated Dec. 2003)</b>
<b>Gretchen Zaunbrecher</b>	<b>VAPH (Genetics)</b>	<b>Co-Chair (graduated Dec. 2003)</b>
<b>Scott Dindot</b>	<b>VAPH (Genetics)</b>	<b>Co-Chair (graduated Aug. 2003)</b>
<b>Robert D. Schnabel</b>	<b>VTPB (Genetics)</b>	<b>Chair (graduated Aug. 2001)</b>
<b>Todd J. Ward</b>	<b>VTPB (Genetics)</b>	<b>Chair (graduated, May 2000)</b>
<b>Alex P. Rooney</b>	<b>VTPB (Genetics)</b>	<b>Chair (graduated, Aug. 1998)</b>
Fahad Alshanbari	VIBS	Member
Miranda L. Wilson	BIMS	Member
Anas Khanshour	VIBS	Member (graduated Dec. 2012)
Brittany Jones	VTPB (Genetics)	Member (graduated Dec. 2012)
Thad Adams	ANSC	Member (graduated Dec. 2012)
Erin Gillenwaters	VTPB (Genetics)	Member (graduated Aug. 2011)
Jason Osterstock	VTPB	Member (graduated Dec. 2007)
Ralph Callicott	VTPB (Genetics)	Member (graduated May 2008)
Tonya Amen	ANSC	Member (graduated May 2007)
Christopher Schutta	VTPB	Member (graduated May 2006)
Bin Zeng	VTPB	Member (graduated Dec. 2006)
Glenda Goh	VAPH (Genetics)	Member (graduated Dec. 2004)
Stephan White	VTPB (Genetics)	Member (graduated Aug. 2003)
Michael Golding	VTPB	Member (graduated Dec. 2003)
Edward Cargill	VTPB (Genetics)	Member (graduated May 2003)
Kristen Janelle-Hawkins	ANSC (Genetics)	Member (graduated Aug. 2003)
Melissa Cox	VTPB (Genetics)	Member (graduated Dec. 2003)
James Thomson	VAPH (Genetics)	Member (graduated Aug 2001)
Heather Newkirk	VAPH (Genetics)	Member (graduated May 2001)
Wade Ryberg	WFSC (Genetics)	Member (graduated May 2001)
Quinton Winger	VTPB (Genetics)	Member (graduated May 2000)
Ikhide Godwin Imumorin	ANSC	Member (graduated Dec. 2000)
Beverly Finklea	VAPH (Genetics)	Member (graduated May 1999)
Joseph P. Bielawski	WFSC (Genetics)	Member (graduated May 1999)
David Riley	ANSC (Genetics)	Member (graduated May 1999)
Paul Bielic	VAPH (Genetics)	Member (graduated Aug. 1998)
Barbra Campbell	VAPH (Genetics)	Member (graduated Dec. 1998)
Emilie Genho	ANSC (Genetics)	Member (graduated Dec. 1998)

Ravi Iyer	BICH	Member (graduated May 1998)
Cathi A. Lehn	ANSC (Genetics)	Member (graduated Aug. 1998)
Caird Rexroad	VTPB (Genetics)	Member (graduated May 1998)
Rosalee McShane	VAPH (Genetics)	Member (graduated Aug. 1998)
Xiadong Wu	ANSC (Genetics)	Member (graduated Aug. 1998)
Brenden Holland	OCNG	Member (graduated May 1997)
Karen Moore	VAPH (Genetics)	Member (graduated Dec. 1997)
Robert Barber	VTPB (Genetics)	Member (graduated May 1997)
Qing Gao	VTPB (Genetics)	Member (graduated May 1996)
David Starkey	ANSC (Genetics)	Member (graduated May 1997)
Eddie Louis	ANSC (Genetics)	Member (graduated May 1996)
Yaping Yang	VTPB (Genetics)	Member (graduated Dec. 1996)
Yi Hai Jiang	NURT	Member (graduated May 1995)

**M.S.**

<b>Sierra Kay</b>	<b>BIMS</b>	<b>Chair</b>
<b>Ernest Fon</b>	<b>BIOT</b>	<b>Co-Chair (graduated Dec. 2017)</b>
<b>Kristen E. Streeter</b>	<b>BIMS</b>	<b>Co-Chair (graduated Dec. 2016)</b>
<b>Joseph Modarelli</b>	<b>BIMS (Genetics)</b>	<b>Co-Chair (transferred to Ph.D.)</b>
<b>Michelle Luster</b>	<b>BIOT</b>	<b>Chair (graduated Aug. 2016)</b>
<b>Ryan Fountain</b>	<b>COFD</b>	<b>Chair (departed for nursing school)</b>
<b>Jerad Dabney</b>	<b>BIMS</b>	<b>Chair (graduated May 2012)</b>
<b>Nathan Dewsbury</b>	<b>BIOT</b>	<b>Chair (graduated Aug. 2010)</b>
<b>Lacy Caulk</b>	<b>COFD</b>	<b>Chair (graduated Aug. 2006)</b>
<b>Timothy Novak</b>	<b>COFD</b>	<b>Chair (graduated Aug. 2003)</b>
<b>Greg Peters</b>	<b>ANSC (Genetics)</b>	<b>Chair (graduated Aug. 2002)</b>
<b>Jose Miguel Arriaga</b>	<b>VTPB</b>	<b>Chair (graduated May 2002)</b>
<b>Alice E. Keller</b>	<b>VTPB (Genetics)</b>	<b>Chair (graduated May 1996)</b>
Brittany Kerr	WFSC	Member
Cerami, Kathryn	BIOT	Member
Haley White	BIOT	Member
Thomas Logan	VTPB	Member
Thad Adams	ANSC	Member (graduated Dec. 2007)
Iman M. Al-Swaiti	COFD	Member (graduated May 2005)
Laura Montier	COFD	Member (graduated May 2005)
Samantha Cunningham	ANSC	Member (graduated May 2004)
Jonathan I. Santos	COFD	Member (graduated May 2003)
Jo Anna Zuniga	COFD	Member (graduated May 2003)
Jill McCoy	PPIB	Member (graduated Aug. 2001)
Koryn Wunderlich	PPIB	Member (graduated Aug. 2001)
Natalie Wreyford	VLAMS	Member (graduated May 2001)
Sandy Shaffer	PPIB	Member (graduated Aug. 2001)
Susan Souers	PPIB	Member (graduated Aug. 2001)
Baitsi Podisi	ANSC	Member (graduated May 1998)
Yibing Song	ANSC (Genetics)	Member (graduated Aug. 1998)
Susan Tanksley	ANSC (Genetics)	Member (graduated Dec. 1998)
Regina Weak	VAPH	Member (graduated May 1998)
Thomas Brodigan	VTPB	Member (graduated May 1998)
April Harlin	WFSC	Member (graduated May 1998)
Trina M. Guerra	ANSC (Genetics)	Member (graduated Aug. 1998)
Lisa Gefrides	VAPH (Genetics)	Member (graduated Aug. 1998)
Tana C. Wheeler	ANSC (Genetics)	Member (graduated May 1997)
Kimberly A. Greer	VAPH	Member (graduated Dec. 1996)
Emmanuel Lutaaya	ANSC (Genetics)	Member (graduated Dec. 1996)

Pepper A. Chastain	ANSC (Genetics)	Member (graduated Dec. 1995)
Chen Chen Yen	ANSC (Genetics)	Member (graduated Dec. 1995)
Kim Herring	ANSC (Genetics)	Member (graduated Dec. 1995)
Kevin Weis	VAPH (Genetics)	Member (graduated May 1994)

#### **Graduate students outside of TAMU (Ph.D.)**

Christiane Hansen	Univ. of Manitoba	Member (graduated May 1997)
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#### **Graduate Committee representative**

Philip Brown	MATH	GCR (graduated)
Yvonne Eixmann	EHRD	GCR (graduated)
Karine Brand	MEEN	GCR (graduated)

#### **Recent undergraduate students working in my laboratory**

Trevor Cook	2019 - 2019
Cole Bernstein	2019 - 2019
Lena Aryari	2015 - 2019
Daniella Julian	2017 - 2018
Kaylee Dixon	2016 - 2017
Micaela Johnson	2015 - 2017
Patrick Loundemilk	2015 - 2016
Kearns, Kristina	2014 - 2015
Connor McCurdy	2014 - 2015
Katherine Mull	2014 - 2015
Danielle Vaden	2014 - 2015
Alex Freeman	2013 - 2014
Colin Braden	2012 - 2014
Mason Bates	2012 - 2014
Jake Simpson	2012 - 2013
Ryan Fountain	2012 - 2013
Floyd Barns	2009 - 2011
Kristen Muller	2009 - 2011
Ashley Marshall	2009 - 2010
Tracey Angadicheril	2009 - 2010
Manju Mohan	2007 - 2009
Kavila Krishnan	2007 - 2009
Mellisa Hain	2009 summer
Laura Cox	2009 summer
Teryin Wixson	2009 summer
Jennifer Churchill	2005 - 2008
Kelly Orr	2007 - 2008
Amanda Gaither	2006 - 2007
Lance Shaffer	2006 - 2007
Kimberly Jeunen	2006 - 2007

#### **Post-Doctoral Students / Research Professors**

Natalie Halbert, Ph.D. Assistant Research Professor (2006 - 2010)

### Technicians in the Laboratory

April Rosales 2019 - present  
Amy Boedeker 2017 - 2018  
Xiaomin Cai, Ph.D. Laboratory Manager (2008 - 2017)  
Hanna Braden, BS Technician (2009 - 2013)

### Graduate student matriculation (Major Adviser)

**Alice E. Keller** graduated with a Master's of Science degree in Genetics in May of 1996. She successfully obtained a graduate research fellowship to attend Cornell University to continue her graduate education in Biometrics. She is completing her degree requirements and works for a consulting company, the Emmes Corporation, as a Biostatistician in the Washington DC area.

**Alex P. Rooney** graduated with a Ph.D. in Genetics in December 1998. His dissertation title is "Assessment of Recent Bottlenecks: A Case Study of the Bering-Chukchi-Beaufort Seas Stock of Bowhead Whales". While a graduate student here at Texas A&M University, Mr. Rooney distinguished himself by receiving an award for graduate research through the Faculty of Genetics, a College of Veterinary Medicine - Graduate Student Association Award (1st place) for a research presentation at the annual Fall Forum (1996) and a CVM-GSA mini-grant travel award. Mr. Rooney completed post-doctoral studies with Dr. Masatoshi Nei, Institute of Molecular Evolutionary Genetics; Pennsylvania State University worked as an Assistant Professor at Mississippi State University for two years and now is employed by the USDA National Center for Agriculture Utilization Research in Peoria, IL.

**Todd J. Ward** began graduate work in September of 1995. His dissertation title is "An Evaluation of the Outcome of Interspecific Hybridization Events Coincident with Dramatic Demographic Decline in North American Bison". Mr. Ward won second place in the 1997 Genetics Graduate Student Poster competition and received travel awards from the College of Veterinary Medicine and the Faculty of Genetics. Dr. Ward graduated in May of 2000, and he is employed at the USDA National Center for Agriculture Utilization Research in Peoria, IL.

**Robert D. Schnabel** joined my laboratory in the fall of 1997 and graduated in August of 2001. His dissertation title is "Developing DNA-Based Technologies in North American Bison: Parentage Testing, Linkage Mapping and QTL Scans". He won second place in the 2001 Genetics Graduate Student Research competition. He worked for 18 months for the USDA in Beltsville, MD as a research scientist and is now a Research Assistant Professor in the Department of Animal Sciences at the University of Missouri.

**Jose Miguel Arriaga** completed his degree requirements for a Master's of Science in genetics in August of 2002. His thesis title is "Detection of *Rhodococcus equi* by Polymerase Chain Reaction Using Species-Specific, Non-Proprietary Primers". He is currently employed at a biotech company in the Woodlands, TX.

**Greg Peters** complete his degree requirements for a Master's of Science in genetics in August of 2002. He completed the MBA program at Texas A&M University in 2003 and owns a private company in Austin, Texas that provides genetic testing services for livestock. He currently is employed at National Beef in Kansas City, Missouri.

**Scott Dindot** was originally mentored by Jorge Piedrahita in Veterinary Anatomy and Public Health at Texas A&M University. I assumed the responsibilities of his co-chair when Dr. Piedrahita left the University. Scott graduated in August of 2003 and was a post-doctoral researcher at the Baylor College of Medicine in Houston, Texas. Currently, he is an Associate Professor in the Department of Veterinary Pathobiology at Texas A&M University.

**Gretchen Zaunbrecher** was originally mentored by Jorge Piedrahita in Veterinary Anatomy and Public Health at Texas A&M University. I assumed the responsibilities of her co-chair when Dr. Piedrahita left the University. Gretchen graduated in 2004.

**Natalie D. Halbert** joined my laboratory in September 1999 as a Ph.D. student in Genetics. Her dissertation title was “The Utilization of Genetic Markers to Resolve Modern Management Issues in Historic Bison Populations: Implications for Species Conservation”. Ms. Halbert graduated in December of 2003. She won first place in the Annual Genetics Graduate student research competition for 2002 and first place in the 2002 Texas Genetics Society Ph.D. poster competition. She was employed as an Assistant Research Professor in the Department of Veterinary Pathobiology, TAMU until June 2010.

**Timothy Novak** graduated in August of 2003 with a Masters in Biotechnology. He was employed with Sigma-Genosys in Denver, Colorado until he was promoted and transferred to Houston, Texas in 2005.

**Chris M. Seabury** joined my laboratory in the fall of 2001 and graduated in December of 2004 with a Ph.D. in Genetics. His dissertation title was “Genetic Evaluation of The Ovine and Bovine Prion Protein Genes (*PRNP*)”. Chris is currently employed as an Associate Professor in the Department of Veterinary Pathobiology TAMU.

**Lauren Dobson** graduated in May of 2015. Her dissertation was entitled: “Sequencing the Genome of American Bison”. She is employed in the Department of Small Animal at Texas A&M University as a Post-Doctoral Researcher working with Dr. Brian Saunders.

**Student advising outside the classroom (Undergraduate, Graduate, Professional)**

Participating on graduate committees requires that I spend a considerable amount of time advising students in research projects and course work. I am involved in the TAMU MENTORS program where I am available to listen and hopefully provide academic and personal assistance to students. Throughout the years I have been involved in some short-term programs that are designed to give High School students, undergraduate students and public school teachers opportunities to increase their knowledge and research experience in a modern molecular biology laboratory.

**RESEARCH/SCHOLARLY ACTIVITIES**

<b>CURRENT AND RECENT FUNDING</b>			
<b>SPONSOR</b>	<b>Title (PI and/or Co-PI)</b>	<b>Total Grant Amount</b>	<b>Funding Period 2016-2019</b>
National Park Service – US Department of the Interior	(PI) Bison Partnership: Genetic Conservation Initiative – Wind Cave National Park	47,000	47,000
The Nature Conservancy	Expanding on The Nature Conservancy-Wind Cave National Park Bison Partnership: Genetic Conservation Initiative	39,000	39,000
Turner Enterprises INC	The Application of Genomic Technologies for American Bison: Development of a SNP-Based <i>BisonChip</i> Assay	30,000	30,000

The Nature Conservancy	The Application of Genomic Technologies for American Bison: Development of a SNP-Based <i>BisonChip</i> Assay	31,000	31,000
Dallas Safari Club	A Century of Conservation Genetics: Reconstructing Historical Population Size & Genetic Diversity of African Lions from 100 years ago to Ensure their Future	5,000 11,255 (equipment)	5,000 11,255
Dallas Safari Club	Next-Generation Whole Genome Sequencing of 155 Historical Lion DNA Samples	26,225	26,225
National Park Service – US Department of the Interior	(PI) Reassessment of Genetic Diversity in Yellowstone National Park Bison	38,298	38,298
<b>Total funding received by you</b>		<b>109,000</b>	<b>\$227,778</b>

**BIBLIOGRAPHY: Publications in refereed journals from over 75 publications.**

**Carr, S.M., S.W. Ballinger, J.N. Derr, J.W. Bickham and L.H. Blankenship.** 1986. Mitochondrial DNA analysis of hybridization between sympatric white-tail and mule deer in west Texas. *Proceedings of the National Academy of Science, USA*. 83:9576-9580.

**Derr, J.N., J.W. Bickham, I.F. Greenbaun, A.G.J. Rhodin and R.A. Mittermeier.** 1987. Biochemical systematics and evolution in the South American turtle genus *Platemys* (Pleurodira:Chelidae). *Copeia*. 1987:2. 370-375.

**Lee, T.E., J.N. Derr, J.W. Bickham and T.L. Clark.** 1989. Genetic variation in West Texas pronghorn antelope. *Journal of Wildlife Management*, 53:890-896.

**Derr, J.N.** 1991. Genetic interactions between white-tailed and mule deer in the southwestern United States. *Journal of Wildlife Management*, 55:228-237.

**Derr, J.N., D. W. Hale, D. L. Ellsworth and J.W. Bickham.** 1991. Fertility in a F1 male hybrid of white-tailed deer (*Odocoileus virginianus*) X mule deer (*O. hemionus*). *Journal of Reproduction and Fertility*. 93:111-117.

**Lockwood, S.F. and J.N. Derr.** 1992. Intra- and interspecific genome size variation in the Salmonidae. *Cytogenetics and Cell Genetics*, 59:303-306.

**Cameron, S.A., J.N. Derr, A.D. Austin, J.B. Woolley and R.A. Wharton.** 1992. Molecular systematics of the Hymenoptera: a review of methods, procedures and analysis. *Journal of Hymenoptera Research*, 1: 63-79.

**Derr, J.N., S.K. Davis, J. Woolley and R. Wharton.** 1992. Variation and the phylogenetic utility of the large ribosomal subunit of mitochondrial DNA from the insect order Hymenoptera. *Molecular Phylogenetics and Evolution*, 1:136-147.



- Derr, J.N., S.K. Davis, J. Woolley and R. Wharton.** 1992. Reassessment of the 16S rRNA nucleotide sequence from members of the parasitic Hymenoptera. *Molecular Phylogenetics and Evolution*, 1:338-341.
- Morales, J.C., J.W. Bickham, J.N. Derr, B.G. Hanks and B.J. Gallaway.** 1993. Allozyme analysis of population structure of Arctic Cisco (*Coregonus autumnalis*) from the Beaufort Sea. *Copeia*. 93:863-867.
- Bickham, J.W., V.L. Sawin, K. McBee, J.N. Derr, B.G. Hanks and B.J. Gallaway.** 1994. Further studies on the effects of triethylenemelamine on somatic and testicular tissues of the rat using flow cytometry. *Cytometry*, 15.
- Aukema, H.M., L.A. Davidson, W.-C.Chang, J.R. Lupton, J.N. Derr and R.S. Chapkin.** 1994. Dietary modulation of rat colonic cAMP-dependent protein kinase. *Biochimica et Biophysica ACTA* 1224:1-10.
- Davidson, L.A., Y.-H. Jiang, J.N. Derr, H.M. Aukema, J.R. Lupton and R.S. Chapkin.** 1994. Protein kinase C isoforms in human and rat colonic mucosa. *Archives of Biochemistry and Biophysics*. 312:547:553.
- Arevalo, E., D.A. Holder, J.N. Derr, E. Bhebhe, R.A. Linn, J.F. Taylor, S.K. Davis and F. Ruvuna.** 1994. Caprine dinucleotide repeat polymorphisms at the SR-CRSP-1, SR-CRSP-2, SR-CRSP-3, SR-CRSP-4 and SR-CRSP-5 loci. *Animal Genetics* 25:202
- Bhebhe, E., J. Kogi, D.A. Holder, Arevalo, E., J.N. Derr, R.A. Linn, J.F. Taylor, S.K. Davis and F. Ruvuna.** 1994. Caprine dinucleotide repeat polymorphisms at the SR-CRSP-6, SR-CRSP-7, SR-CRSP-8, SR-CRSP-9 and SR-CRSP-10 loci. *Animal Genetics* 25:203.
- Gallagher, D.S., J.N. Derr and J.E. Womack.** 1994. Chromosome conservation among the advanced Pecorans and determination of the primitive bovid karyotype. *Journal of Heredity*. 85:204-210.
- Reese, R.L., M. Hyman, M.W. Rowe, J.N. Derr and S.K. Davis.** 1996. Ancient DNA from Texas Pictographs. *Journal of Archaeological Science* 23:269-277.
- Ficht, T.A., H.S. Husseinen, J. Derr and S.W. Bearden.** 1996. Species-specific sequences at the omp2 locus of Brucella type strains. *International Journal of Systematic Bacteriology* 46:329-331.
- Piedrahita, J.A., R. Weeks, A. Petrescu, T.W. Schrode, J.N. Derr and J.E. Womack.** 1997. Genetic Characterization of the bovine leukemia inhibitory factor (LIF) gene: isolation and sequencing, chromosome assignment and microsatellite analysis. *Animal Genetics* 28:14-20.
- 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. Merrit and J.N. Derr.** 1999. Microsatellite diversity in captive bottlenose dolphins (*Tursiops truncatus*). *Journal of Heredity* 90:228-331.
- Phalen, DN, V.G. Wilson, J.M. Gaskin, J.N. Derr and D.L. Graham.** 1999. Genetic diversity in twenty variants of the avian polyomavirus. *Avian Diseases* 43:207-218.
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**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.

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**Su, H., J. McKelvey, D. Rollins, M. Zhang, D. J. Brightsmith, J. Derr, and S. Zhang.** 2014. Cultivable Bacterial Microbiota of Northern Bobwhite (*Colinus virginianus*): A New Reservoir of Antimicrobial Resistance? *PLoS ONE* 9:e99826.

**C.J. Curry, P.A. White, J.N. Derr.** 2015. Mitochondrial Haplotype Diversity in Zambian Lions: Bridging a Gap in the Biogeography of an Iconic Species. *PLoS ONE* 10(12):e0143827.

**D.H. Ranglack, L.K. Dobson, J.T. du Toit and J. Derr.** 2015. Genetic Analysis of the Henry Mountains Bison Herd. *PLoS ONE* 10(12):e0144239.

**Forgacs, D, R.L. Wallen and J.N. Derr** 2016. Mitochondrial Genome Analysis Reveals Historical Lineages in Yellowstone Bison. *PLoS ONE* 11(11):e0166081.

**Lee, M.O., L. Dobson, B.W. Davis, L. Skow, J. Derr and J. Womack.** 2018. Genomic structure and tissue expression of the NK-lysin gene family in bison. *Journal of Heredity* 109 (5) 598-603..

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**Curry, C.J. and J.N. Derr.** 2019. Development of lion miniSTRs for use with modern and historical DNA samples. *African J. of Wildlife Research*, 49(1): <https://doi.org/10.3957/056.049.0064>

**Curry, C. J., P. A. White J. N. Derr.** Genetic Analysis of Lions in Zambia Support Movement across Anthropogenic and Geological Barriers. In preparation.

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Refereed Proceedings/Monographs:

**Derr, J.N. S.K. Davis, J.L. Estrada, J.E. Ossa, M. Westhusin, J. Piedrahita and L.G. Adams.**

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**Rooney, A., R.L. Honeycutt, M. Nei, R. Chakraborty, and J.N. Derr.** 1998. Evaluating the likelihood of a potential recent bottleneck in the Bering-Chukchi-Beaufort Seas stock of bowhead whales (*Balaena mysticetus*). Paper SC/50/AS13, Proceedings of the IWC Scientific Committee, Muscat, Oman.

**Derr, J.N.** 1998. Conservation Genetics and Hybridization. Proceedings of the Congreso Iberoamericano de razas autoctonas y Criollas in Tampico, Tamaulipas, Mexico.

**Rooney, A., S.K. Davis, R.L. Honeycutt, and J.N. Derr.** 1999. Evaluating the likelihood of a potential recent bottleneck in a population of bowhead whales (*Balaena mysticetus*) from patterns of microsatellite diversity and genetic disequilibria. Paper SC/51/AS16, Proceedings of the IWC Scientific Committee, Saint George, Grenada.

**Derr, J.N.** 2001. Genetics and public herds in the 21<sup>st</sup> century. Pages 25 - 28. *in* Rutley, B.D., ed., Bison are back - 2000. Proceedings of the International Bison Conference, Aug. 2 - 4 2000 Edmonton, Alberta.

**Derr, J.N, Seabury C.M., Schutta, C., Templeton, J.W.** 2002. Genetic Resistance to Disease in Bison. *In Brucellosis in Elk and Bison in the Greater Yellowstone Area.* pp. 97-98. Jackson, Wyoming. Greater Yellowstone Interagency Brucellosis Committee.

**Gates, C.C. et.al.** 2010. American Bison: Status Survey and Conservation Guidelines 2010. International Union for Conservation of Nature (IUCN). 134 pages.

**Book Chapters:**

**Gogan, P., J. Derr, N. Halbert and C. Gates.** 2005. Restoration of Populations of Large Mammalian Herbivores: Principles and Case Studies. Pp. 161 - 178 *in* Health threats for the European bison particularly in free-roaming populations in Poland. Wydawnictwo SGGW Agricultural University of Warsaw. pp. 320.

**Reece, R.L., E.J. Mawk, J.N. Derr, M.Hyman, M.W. Rowe and S.K. Davis.** 1996. Ancient DNA in Texas rock paintings. (M. V. Orna, ed.). pp. 378 - 391. *in* Archaeological Chemistry: Organic, Inorganic and Biochemical Analysis.

**Schmidly, D.J., K.T. Wilkins and J.N. Derr.** 1993. Biogeography. *in* Biology of Heteromyid rodents. (H.H. Genoways and J.H. Brown eds.). American Society of Mammalogists, Special Publication.

**Other publications:**

Authored an article for *African Outfitter* Magazine, "**African Genetics Conservation Project**" January 2011.

Authored an article for the Canadian Bison Association publication *Smoke Signals* entitled "**Closed or Open Bison Herds, Recommendations From a Geneticist.**" October, 2015

Co-authored an article for the National Bison Association publication "Bison World" entitled "**The Return of European Bison (Wisent) to Russia**" June 2017.

### **Patents and Related Discovery Activities**

United States Patent # 7,083,925. **Inventors R. D. Schnabel and J.N. Derr.** Issued 8/1/2006  
"Method for Parentage Testing in North American Bison"

### **Service Activities:**

**Professional Organizations and Service:** President (2001 - 2003) and a member of the Board of Directors of the Texas Genetics Society.

**Reviewer for submitted manuscripts** for numerous societies, journals, and publishers. A partial list includes Animal Genetics, Journal of Heredity, Canadian Journal of Zoology, Conservation Biology, Journal of Mammalogy, and Royal Society of London.

### **Major Committee Assignments:**

#### Departmental:

**Chair, Departmental Promotion and Tenure Committee**, 2015 – present  
**Wildlife Herd Health Search Committee**, Chair 2012 – 2014 (Hired Dr. Walter Cook)  
**Phage Biology Search Committee**, Chair 2011 - 2012  
**Department Head Advisory Committee for VTPB.** 2006 - 2010  
**Interim Department Head advisory committee for VTPB.** 2005 - 2006  
**Graduate studies and Seminar Committee**, Veterinary Pathobiology, 1994 - 2002.  
**Graduate Student Association Travel Awards Committee**, College of Veterinary Medicine  
1995 - 1998.

#### College:

**CVM Promotion and Tenure Committee**, 2015 - present  
**CVM Continuing Education Advisory Committee**, 2016 - 2018  
**VTPB Department Head Search Committee**, 2006  
**CVM Staff Recognition Award Committee**, 2004  
**Formula Animal Health CVM Committee**, 1998 - 2001.

#### University:

**Federal Demonstration Project. TAMU faculty representative.** 2009 - 2012.  
**Agriculture Program Faculty Advisory Committee, APFAC, College of Agriculture TAMU** 2005 - 2007.  
**University Research Infrastructure Oversight Committee (URIOC)**, 2005 - 2007.  
**Council of Principal Investigators, Executive Committee** 2004 - 2006.  
**Council of Principal Investigators**, 2002 – 2008.  
**Undergraduate Curriculum Committee**, Faculty of Genetics, 1998 - 2000.  
**Graduate Work/Recruiting Committee**, Faculty of Genetics, 1994 - 1998.  
**Executive Committee**, Faculty of Genetics, 1996 - 2002 (Chairman of the Faculty 2000 - 2002).

#### Professional:

**Reference panelists** for the NSF-funded BIO-POWER program (Professional Opportunities for Women in Research and Education). National Science Foundation, Washington, DC. August 1997.

**External reviewer** for dissertation research, University of Manitoba. I traveled to Winnipeg, Manitoba to review the scientific quality and merit of Ms. Christine Hansen's doctoral work. April 1997.

The Food and Agriculture Organization of the United Nations (FAO) as a **reference panelists** to develop a Global Project for the Maintenance of Domestic Animal Genetic Diversity (MoDAD). This panel was established by the FAO in Rome and communicates via e-mail.

**Committee member.** The World Conservation Union, Species Survival Commission, Bison Specialist Group. 1998 - Present.

**Reviewer for grant proposals:** National Science Foundation, United States Department of Agriculture.

**Department of Interior - Bison Working Group** (ad hoc non-federal employee member). 1999 - 2005.

**Sub-Chair for Africa.** Conservation Committee, Safari Club International. 2011 – 2016.

**Hosted the 2016 Texas Bison Association Meeting in College Station,** May 2016.

**Member,** Science and Conservation Committee, The National Bison Association. 2014 – Present.

**Cattle DNA Forensics for the Texas and Southwest Cattle Raisers Association.** I provide expert forensics services for the Texas and Southwest Cattle Raisers Association to help solve cattle thief cases in the State of Texas. We typically provide analysis on 2 to 4 cases per year.

**Member.** Conservation Committee, Texas Bison Association. 2015 – Present.

**International Research Consultant,** Record Book Committee, Safari Club International. 2016 – Present.

**Member of the US Delegation.** International Council for Game and Wildlife Conservation (CIC) (Hungary). 2016 – present.

#### **Membership in Professional Associations**

The Texas Genetics Association  
Safari Club International  
Dallas Safari Club  
Houston Safari Club  
American Bison Society  
National Bison Association  
Canadian Bison Association  
Texas Bison Association

#### **OTHER SCHOLARLY ACTIVITY:**

**Recent Invited Presentations, Symposia, Colloquia and Named Lectures (since 2010)**

**Conservation genetics of wildlife resources.** The “Green Vets’ student organization, College of Veterinary Medicine, TAMU September 2010. 1 hour.

**A systematic program of conservation genetics for African wildlife.** The Houston Safari Club. June 2010. 1 hour.

**“Conservation Genetics of Wildlife Resources” or what are we doing in this college in the field of conservation genetics? Or “Wildlife Conservation One Bullet at a Time”.** Presented to the TAMU Professional Student Association “Green Vets”, September 2011

**Genomics, genetics and health: African wildlife conservation.** This updated presentation was given at the following meetings (30 - 45 minutes each).

The African Wildlife Consultative Forum, Victoria Falls, Zimbabwe, October 2010.

The African Wildlife Consultative Forum, Kingdom of Swaziland, October 2011.

The Professional Hunters Association of South Africa, November 2009, 2010 and 2011.

The Namibian Professional Hunters Association, November 2009, 2010 and 2011.

**Molecular Biotechnology and the Conservation of American Bison.** Presented at New Mexico State University, Minority Access to Research Careers program. Las Cruces, NM. October 2011. (1 Hour)

**Expert witness for the State of Florida.** Testified in a felony cattle theft case. Provided DNA parentage data and analysis. October 2011.

**DNA Capabilities and Proper Evidence Collection Procedures for Livestock.** Presented at the Special Rangers annual meeting of the Texas and Southwestern Cattle Raisers Association, Game Warden Training Facility, Lake Texoma, TX April 2012.

**Molecular Biotechnology and the Conservation of American Bison: A Model for Wildlife Conservation Worldwide.** Presented at the Forensic Investigative Research & Education Group (FIRE) at the University of North Texas Health Science Center, Fort Worth, TX. May 2012

**Texas Bison Association: Update on the Texas State Bison Herd: Current Genetics Studies and Bison genomics.** Presented at the annual meeting of the Texas Bison Association, Lubbock, TX May 2012.

**Mitochondrial Genomics of American Bison: Evolution, Diversity, Integrity, and Phenotypes.** Presented at the International Bison Conference, Quebec City, Canada, July 2012.

**Update on Bison Conservation Genetics for the US Federal Herds.** Presented at the Department of Interior Bison Management Meetings in Rapid City, SD. December 2012.

**Mitochondrial Genomics of American Bison.** Presented at the National Bison Association annual meeting in Denver, CO January 2013.

**A Systematic Approach to African Wildlife Conservation Genetics.** Presented at the Dallas Safari Club annual convention, Dallas, TX. January 2013.

**Saving Genomes.** Presented at the Texas Master Naturalist, Brazos Valley Chapter at the Brazos Valley Museum of Natural History. March 2013.

**A Systematic Approach to Wildlife Conservation Genetics – From Bison to Buffalo.** Presented at the Wildlife and Fisheries Science student organization, COALS, TAMU. March 2013.

**Molecular Biotechnology and the Conservation of the American Bison: A Model for Wildlife Conservation Worldwide.** Presented at Department of Veterinary Pathobiology weekly seminar



series as a post-tenure presentation. College Station, TX. May 2013.

**Conservation Genetics: Using Biotechnology for Worldwide Wildlife Conservation.** Presented at College Station Consolidated High School class "Biotechnology". May 2013.

**Genetic Technologies for American Bison.** Presented at the Texas Bison Association fall roundup, Crockett, TX October 2013.

**DNA Testing For American Bison.** Presented at the Intertribal Bison Cooperative. Las Vegas, NV. December 2013.

**National Bison Association Genetics Workshop: A Renewed Genetic Registry for the NBA.** Keynote presentation at the National Bison Association annual meeting in Denver, CO. January 2014.

**Genomics, Genetics, and Health: African Wildlife Conservation.** Presented at the Vets Without Borders Organization, CVM, TAMU. February 2014

**A Century of Conservation Genetics: Reconstructing Historical Population Size and Genetic Diversity of African Lions from 100 Years Ago to Help Ensure Their Future.** Presented at the African Wildlife Consultative Forum, Awassa, Ethiopia, November 2014.

**Genetic Health of North American Bison.** Presented at the 1st International Symposium on Bison Health - Saskatoon, Saskatchewan, Canada, June 2015.

**Conservation Genetics of Wildlife Resources.** Presented at the Green Vets Club, CVM, TAMU, September 2015

**Poster Competition Judge.** Evolution of Stress: From the Genome to Disease, CVM, TAMU, October 2015.

**Canadian Bison Association Annual Membership Meeting.** Regina, Saskatchewan, Canada, November 2015

**Bison Health. National Academy of Sciences,** Washington DC. December 2015

**The Nature Conservancy Annual Managers Meeting.** Austin, TX February 2016.

**Intertribal Bison Council Annual Meeting.** Las Vegas, NV November 2016.

**Conservation Genetics of the US National Mammal – North American Bison.** The Interdisciplinary Faculty of Genetics and the Genetics Graduate Student Association. February 2017.

**Conservation Genetics of Wildlife Resources.** Presented at the Green Vets Club, CVM, TAMU, April 2017.

**Conservation Genetics of the US National Mammal – North American Bison.** The Interdisciplinary Faculty of Genetics and the Genetics Graduate Student Association. 20 February 2017.

**Conservation Genetics of the US National Mammal – North American Bison.** TAMU CVM Green Vets. 21 February 2017.

**Traveled to Russia representing the US National Bison Association to explore Collaborations and Research Opportunities between the US and Russia Involving Bison.** April 2017.

**Pe Sla Sioux Nation Bison Herd: A Foundation for Conservation.** Presentation to the Seven Council Fires of the Great Sioux Nation. Rapid City, SD. December 2018.

## **SERVICE ACTIVITIES:**

### **DNA Technologies Laboratory.**

**I am the Director of the DNA Technologies Core Laboratory** for the Department of Veterinary Pathobiology (<http://www.cvm.tamu.edu/dnacore/>). This facility provides fully automated nucleotide sequencing, fluorescence based genotyping and shared capital equipment (nanodrop, thermal cyclers, SpeedVac units) for principal investigators staff and students in the Department of Veterinary Pathobiology as well as others throughout the Texas A&M University system. In fact, researchers from more than 50 different research laboratories typically request more than \$100,000 in services per year through this core laboratory. We also provide genetic testing services for livestock producers, wildlife managers and clinical microbiology labs in the US.

#### **Some projects from the last few years**

- confirmation genotyping of a canine clone
- confirmation of X-linked hereditary nephropathy alleles in Navasota dog project dogs
- DNA sequence identification to species of bacterial isolates from the VTPB Clinical Microbiology Laboratory
- PCR-based confirmation of gene knockout mice
- parentage testing in bovids for herd management and forensics analysis
- determination of genome integrity for American bison (hybridization testing)
- Microsatellite genotyping for genetic diversity analyses in mammals.

This core laboratory employs one graduate student and one to three undergraduate student workers per year.