

## CURRICULUM VITAE

11/05

Franklyn B. Garry, DVM, MS  
Diplomate, American College of Veterinary Internal Medicine

### PERSONAL

Birthdate: November 16, 1955  
Marital status: Married (M. Ragan Adams, MA, DVM)

### PRESENT POSITION

Professor  
Department of Clinical Sciences, Food Animal Medicine and Surgery  
College of Veterinary Medicine and Biomedical Sciences  
Colorado State University  
Fort Collins, Colorado 80523  
970-297-0371 E-mail: fgarry@colostate.edu

### EDUCATION

1973-1977 **BS** in Animal Science and Bioscience, 1977. College of Agriculture and Life Sciences, Cornell University  
1977-1981 **DVM**, 1981. New York State College of Veterinary Medicine, Cornell University  
1984-1987 **MS** with thesis, in Clinical Science, 1987. College of Graduate Studies, Ohio State University

### PROFESSIONAL TRAINING

1982-1984 **Residency**. II Medizinische Tierklinik (Ruminant internal medicine), Ludwig-Maximilian University, Munich  
1984-1986 **Residency**, food animal medicine and surgery. Department of Veterinary Clinical Sciences, The Ohio State University.

### BOARD CERTIFICATION

Board certified, American College of Veterinary Internal Medicine, Specialty: Large Animal Internal Medicine, May 1987

### PROFESSIONAL EMPLOYMENT

7/81-7/82 BF Turner, DVM, Animal Barn, Cortland, New York. Practicing veterinarian, mixed animal practice, 80% bovine and equine.  
8/82-1/84 II Medical Animal Clinic of the Ludwig-Maximilian University at Munich. Residency - ruminant internal medicine.  
7/84-9/86 Department of Veterinary Clinical Sciences, Ohio State University. Residency - food animal medicine and surgery.  
9/87-6/92 - Assistant Professor  
7/92-6/99 - Associate Professor  
6/99-present - Professor, Food Animal Medicine and Surgery, Department of Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State Univ.

### PROFESSIONAL ORGANIZATIONS

American Veterinary Medical Association  
American College of Veterinary Internal Medicine  
American Association of Bovine Practitioners  
American Dairy Science Association  
American Society of Animal Science  
American Association of Small Ruminant Practitioners  
U.S. Animal Health Association  
International Association on Paratuberculosis

**EDITORIAL BOARDS/MANUSCRIPT REVIEW**

Compendium on Continuing Education for the Practicing Veterinarian  
 Journal of the American Veterinary Medical Association  
 American Journal of Veterinary Research  
 Veterinary Therapeutics

**AWARDS**

1987 ACVS Residents' Competition, 22nd Annual Meeting: Clinical presentation.  
 1993 Carl J. Norden Distinguished Teacher Award  
 1998 North American Veterinary Conference: Food Animal Speaker of the Year  
 2002 Pierson-Jensen Food Animal Teaching Award  
 2004 George H. Glover Gallery, Distinguished Contemporary Faculty, CSU CVMBS

**TEACHING ASSIGNMENTS**

Ohio State University 1985-1986

Lectures: Forestomach diseases of cattle (2 hrs), Renal diseases of ruminants (4 hrs) Fluid therapy and electrolyte homeostasis in food animals ( 8 hrs), Ocular diseases of cattle (2 hrs).

Colorado State University 1987-present

Lectures:

Freshman Seminar

AYCC 192. Livestock production issues. 2hr, Fall 02, 03.

Animal Science

AN376. Metabolic Diseases of cattle. 1 hr, Spring 1990.

AN478. Beef production and mgmt. 1 hr, Fall 1998.

AN510, Bovine Reproduction Management. 3 hr, Fall 1999

A634 Integrated Resource Management, Beef Cattle Management, beef herd health. 2hrs, Spring 03.

AN 376 Dairy Farm Operations, 11 hr, Spr 04.

Veterinary Medicine

VM762. Metabolic and endocrine diseases - energy metabolism, mineral disturbances. 5 hrs, Fall 1988-90.

VM756. Renal diseases of ruminants. 2 hrs, Spring 1991.

VM766. Musculoskeletal diseases - lameness in cattle. 1 hr, Fall 1988-91.

VM761. Diseases of the digestive system - ruminants. 14 hrs, Spring 1988-92.

VM786D. Production management II. Neonatal calf management. 4 hrs, Spring 1991, 1992; 2 hrs, Spring 1993.

VM605, VM602. Perspectives in comparative medicine. Individual animal medicine and production management medicine in cattle. 2 hrs, Spring 1989-95.

VM759. Food animal medicine and surgery II. Ruminant neonatology. 5 hrs, Spring 1993; 7 hrs, Spr 1994, 1995.

VM763. Large Animal Medicine. Bovine digestive diseases. Bovine neonatology. 11 hrs, Fall 1995.

VM796J. Food Animal Clinical Problems. 13 hrs, Fall 1995-96.

VM749. Clinical Sciences III. Hemolymphatic diseases. 2 hrs, Fall 1996.

VM601. Perspectives in veterinary med. 2 hrs, Fall 1998, 1 hr Fall 1999.

AY680. Managing a Career in Science. 1 hr, Fall 1999, 2000.

VM757. Food Animal Medicine and Surgery I. Bovine digestive diseases, anesthesia and surgery. 20 hrs, Fall 1992-94; 18 hrs, Spring 1996.

AY695EV Surgical Anatomy – Bovine GI anatomy. 2 hrs, Summer 2001.

VM616. Functional Anatomy. Bovine lameness, GI anatomy. 1 hr, Fall 1998, 2 hrs Fall 1999-05.

VM 796R. Food animal clinical problems. 12 hrs, Fall 1997; 8 hrs, Fall 1998, 15 hrs Fall 1999, 9 hrs Fall 2000-03, 8hrs Fall 04-05.

VM757 Bovine Herd Medicine. Biosecurity, Johne's disease, neonatal problems. 5 hrs Spr 97; 8 hrs Spr 98, Spr 99; 5hrs Spr 00, 6 hrs Spr 01-03, 5 hrs Spr 04-05.

VM745. Introduction to Clinical Sciences I. 6 hrs, Spring 1992-95; 17 hrs, Spring 1996-98, 13 hrs Spr 99-03, 14 hr Spr 04-05.

VM744 Theriogenology. 1hr, Spr 2000-05.

VM648 Food Animal Production and Food Safety. 14 hrs Spring 2001-02, 28 hrs Spring 03-05.

VM795 Group study – 14 hrs, Spr 02.

VM714 Vet Preventive Medicine – Bovine nutrition, beef cattle health maintenance, 2 hrs, Fall 2002-05.

VM796J Swine Medicine. Reproductive diseases, enteric diseases, respiratory diseases, 3 hrs, Fall 2003.

Postgraduate Veterinary Science

VS704. Renal disease. 4hrs, Spring 1988.

VS701. Endocrine-metabolic diseases, lipid metabolism. 1 hr, Fall 1990, 1992.

PS710. Renal pathophysiology. 1 hr, Spring 1993.

VS580. Issues in Animal Agriculture, Graduate course for ILM program, 6 hrs, Spring 1997, 20 hrs Spr 1999.

VS 795. Herd Health Management. 14 hrs, Spr 1998.

VS/A 570 Issues in Animal Agriculture, 28 hrs, Fall 2000, 2002, 2004.

VS650-651. Bovine abdominal surgery. 4 hrs, Fall 1989, '92, '95; 8 hrs Fall '98, 2001, 4 hrs 2004.

VS702. Post Graduate Medicine, ruminant gastrointestinal disease. 1 hr, Spr 2005.

Laboratories:

Animal Science

AN 286. Livestock Practicum. 6 hrs, Fall 1996, 4 hrs Spr 1997.

AN 376 Dairy Farm Operations, 45 hr, Spr 04-05.

Veterinary Medicine

VM786A. Food animal restraint and physical examination. Fall 1988-91.

VM796N. Food animal anesthesia and surgery. Primary instructor, two-week elective, Spring 1989-92.

VM601. Food animal behavior. 6 hrs, Fall 1991-94.

VM786A. Food animal anesthesia and surgery. Primary instructor, one-week, Fall 1992, Spring 1993, 1996, two-weeks, Fall 1993, Spring 1994, Fall 1994, Spring 1995, Fall 1995.

VM616. Bovine limb anatomy. 3 hrs, Fall 1993-96, 2 hrs Fall 1997-98.

VM 786. Food animal diagnostics, anesthesia and surgery. Primary instructor. Two-weeks, Fall 96-01, Spr 97-02, Instructor – 8 hrs Fall 02, 16 hrs Fall 03.

Course Coordinator:

VM704. Postgraduate medicine, Renal disease section, Co-coordinator, Spring 1988.

VM796N. Food animal anesthesia and surgery, two-week elective laboratory, Spring 1989-92.

VM757. Food Animal Medicine and Surgery I, 5 credit hrs, 1992-94.

VM786A. Food Animal Anesthesia and Surgery Laboratory, one-week Junior practicum elective, 4 x/yr, 1992-96.

VM786F. Food Animal Medicine Clinical Rotation, Senior practicum, 1988-96.

VM796R. Food Animal Clinical Problems, New course, 1 credit elective, Fall 1995, 1996.

Food Animal Internship Coordinator, 1995-97.

VS580. Issues in Animal Agriculture, Graduate course for ILM program, 2 credit hrs, New course Spring 1997, Spr 99.

VM786. Food Animal Diagnostics, Anesthesia, and Surgery Laboratory, two-week Junior Practicum elective, 2x/yr, 1996-2001.

VM796R. Food Animal Clinical Problems, Revised course, 2 credit elective, Fall 1997-01.

VM795 Group study in animal agriculture contemporary issues, Spr 03.

VS/A570. Issues in Animal Agriculture, Graduate course for ILM program, Revised course, full approval Spr 2000, 2 credit hrs, Fall 00, 02, 04.

VM648 Food Animal Production and Food Safety, 2 credit hours, Spr 01-05.

AN 376 Dairy Farm Operations, 3 credit hours, Spring 04-05.

**ADVISING**

**Residency**

Jul 1988-Jun 1989 Dr. Thomas Kaser; Food animal internal medicine residency advisor

Jul 1989-Jun 1992 Dr. Brian Aldridge; Food animal internal medicine residency advisor

Jul 1989-Jun 1991 Dr. Jennifer Hutchison; Food animal internal medicine residency advisor

Mar 1991-Jun 1991 Dr. Dawn Morin; Food animal internal medicine, non-conforming ACVIM residency, advisor.

Jul 1992-June 1995 Dr. Christopher Cebra; Food animal internal medicine residency advisor.

**Internship**

July 1991-Jun 1992 Dr. Elisabeth Atwell; Food animal internship advisor.

**Graduate Student**

July 1989-Jul 1992 Dr. Brian Aldridge; Clinical Sciences, advisor. MS August 1992.

July 1989-Dec 1992 Dr. Jennifer Hutchison; Clinical Sciences, advisor. MS December, 1992.

July 1989-Jun 1992 Dr. Lisa Costello; Veterinary nutrition and epidemiology, University of Pennsylvania, affiliate committee member. MS June 1992.

Aug 1989-Dec 1991 Thomas Ridder; Animal Sciences, Colorado State University, committee member. MS December 1991.

July 1991-Dec 1993 John Sonderman; Animal Sciences, Colorado State University, committee member. PhD December 1993.

Aug 1992-Dec 1993 Linda Behrens; Animal Sciences, Colorado State University, committee member. MS December 1993.

July 1992-July 1995 Dr. Christopher Cebra; MS July 1995. Clinical Sciences, Colorado State University, advisor.

July 1993-July 1995 Dr. Margaret Lackey; MS July 1995. Clinical Sciences, Colorado State University, advisor.

Jan 1993-May 1997 Dr. Jennifer Hutchison; PhD July 1997, Environmental Health, Colorado State University, co-advisor.

July 1995-present Dr. Greg Goodell; MS candidate, Clinical Sciences, Integrated Livestock Management studies, CSU, committee member.

July 1996-May 1998 Dr. Grant Dewell; MS May 1998, Agricultural Economics, Integrated Livestock Management studies, CSU, co-advisor.

July 1996-Dec 1998 Dr. Guy Loneragan; MS December 1998, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.

July 1997 – June 1999 Dr. John Wenz; MS June 1999, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.

June 1999-Dec 2000 Bryce Moore, MS December 2000, Animal Sciences, CSU, committee member.

Jan 1999 – Jan 2001 Dr. Yoichi Mizuta, MS Spring 01, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.

Jan 1999 – May 2001 Dr. Heather Hirst, MS May 2001, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.

Jan 1999- Dec 2001 Dr. Guy Loneragan; PhD December 2001, Clinical Sciences, Integrated Livestock Management studies, CSU, committee member.

June 1997-May 2001 Bridget Vesosky; PhD May 2001, Microbiology, Colorado State University, committee member.

June 2000 – Dec 2001 Amy Erickson, MS December 2001, Physiology, CSU, committee member.

May 1997- Dec 2003 Dr. Alexandra DeLille; PhD candidate, Reproductive Physiology, Colorado State University, committee member.

June 2000- Dec 2003 Dr. Maria Celia Antognoli, PhD Dec 2003, Clinical Sciences, Integrated Livestock Management studies, CSU, committee member.

June 2000 – present Dr. Steven Sharkey, MS candidate, Clinical Sciences, Integrated Livestock Management studies, CSU, committee member.

June 2002 – May 2004 Dr. Jason Lombard, MS May 2004, Clinical Sciences, Integrated Livestock Management studies, CSU, co-advisor.

June 2002 – present Dr. Kevin McSweeney, MS candidate, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.

June 2002 – August 2004 Dr. Ivette Roman-Muniz, MS August 2004, Clinical Sciences, Integrated Livestock Management studies, CSU, co-advisor.

Aug 2003 – August 2005 Dr. Samantha Rayroux Uhrig, MS August 2005, Clinical Sciences, Integrated Livestock Management studies, CSU, co-advisor.

May 2004 – present Catherine Simpson, MS candidate, Animal Sciences, CSU, committee member

May 2004 – present Brandon Carlson, MS candidate, Animal Sciences, CSU, committee member

July 2004 – present Dr. Julie Severidt, MS candidate, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.

July 2004 – present Dr. Marzuki Zakaria, PhD candidate, Clinical Sciences, CSU, committee member  
 September 2004 – present Wendy Fulwider, PhD candidate, Animal Sciences, CSU, committee member  
 September 2004 – present Elizabeth Donegan, MS candidate, Animal Sciences, CSU, committee member  
 September 2005 – present Dr. Craig McConnel, PhD candidate, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.  
 September 2005 – present Brad Schneider, MS candidate, Animal Sciences, CSU, committee member

### **Post-Doctorate**

June 2001 – October 2004 Heather Hirst, DVM, MS, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.  
 August 2004 – present Ivette Roman-Muniz, DVM, MS, Clinical Sciences, Integrated Livestock Management studies, CSU, advisor.

### **PVM Students**

Aug 1998 – May 2002 Kevin McSweeney, Integrated Livestock Management  
 Aug 1998- May 2001 Daniel Barkey, Integrated Livestock Management  
 June 2000- Aug 2000 Stacey Jones, Integrated Livestock Management  
 June 2000- Aug 2000 Mary Jones, Integrated Livestock Management summer student  
 June 2000- Aug 2000 Brian Miller, Integrated Livestock Management summer student  
 June 2000- May 2003 Randy Hays, Integrated Livestock Management  
 June 2000- May 2004 Scott Meyer, Integrated Livestock Management  
 June 2001 – May 2004 Julie Severidt, Integrated Livestock Management  
 June 2001 – Aug 2001 Sarah Hadley, Integrated Livestock Management summer student  
 June 2001 – May 2004 Jared Gould, Integrated Livestock Management summer student  
 June 2001 – May 2004 Sarah Menges Tomlinson, Integrated Livestock Management summer student  
 June 2002 – May 2004 Fernando Campos-Chillon, Integrated Livestock Management summer student  
 June 2003 – Aug 2003 Gina Henrickson, Integrated Livestock Management summer student  
 June 2003 – Sept 2003 Catherine Jones, Integrated Livestock Management summer student  
 June 2003 – present Jenny Anderson, Integrated Livestock Management summer student  
 June 2003 – present Michael Suit, Integrated Livestock Management summer student  
 June 2003 – present Kathy Whitman, Integrated Livestock Management summer student  
 June 2004 – present Kendra Flood, Integrated Livestock Management summer student  
 October 2004 – present Armando Nieto, PVM class of 2008, faculty mentor program

### **Honors Students**

Spr 05 - Deborah Thompson Finnegan, Honors thesis, Animal Sciences  
 Spr 05 - Audra Fenimore, Honors section 201, AN376  
 Spr 05 – Laurie Bohannon-Worsley, Honors option VM648  
 Spr 05 – Katie Dickinson, Honors option VM648  
 Spr 05 – Megin Nichols, Honors option VM648  
 Spr 05 – Julie Amick, Honors option VM648

### **Coordinator - Integrated Livestock Management Summer Student program**

Summer 2000, 6 PVM student participants  
 ILM Student Forum – October 14, 2000  
 Summer 2001, 12 PVM student participants  
 ILM Student Forum – December 1, 2001  
 Summer 2002, 10 PVM student participants  
 ILM Student Forum – December 4, 2002  
 Summer 2003, 8 PVM student participants  
 ILM Student Forum – December 3, 2003  
 Summer 2004, 6 PVM student participants

ILM Student Forum – December 1, 2004

## COMMITTEES

### Professional

1988-89	ACVIM Credentials Committee
1991	ACVIM, Food Animal Special Interest Group, Chairman
1995-00	AABP, Animal Welfare Committee
1995-97	ACVIM, Large Animal Issues ad hoc Committee
1996-98	Livestock Conservation Institute, Board of Directors
1996-99	North American Veterinary Conference, Dairy Program, Chairman
1997-present	USAHA, Johne's Disease Committee
1997-present	USAHA, National Johne's Disease Working Group, 2004, education subcommittee chair
1998-present	Colorado Johne's Disease Advisory Committee
2001-05	Colorado Bio-waste Disposal and Utilization Committee
2002-present	High Plains Intermountain Center for Agricultural Safety and Health, Advisory committee

### University

1995-97	Faculty Council
1995-02	Integrated Resource Management, Core Committee
1995-97	Integrated Livestock Management, Strategic Planning Committee, Chairman
1996-02	Integrated Livestock Management, Curriculum Committee, Chairman
1996-2002	Animal Care and Use Committee (co-chair 1999-2001)
2002-present	Faculty Council
2001-present	Center for Animal Agriculture and Community Enhancement
2003	Misconduct in Science committee
2003-present	Interdisciplinary Studies Program Food Science/Safety, Faculty Advisory Board

### College

1988, 1989	Annual Conference Committee (Chairman, 1989)
1990	Curricular Study Group - Gross Anatomy
1990-1991	Curricular Study Group - Behavior
1994-1995	Food Animal Teaching Addition - Coordinator of Design & Construction
1995-1997	Annual Conference Committee (Food Animal Chair, 1997)
1996	Ad Hoc Committee on Chronic Pain in Research Animals (Chair)
1999-2000	College Reorganization Leadership Forum and Subcommittee
2000-2001	Reorganization Steering Committee – Department of Clinical Sciences
2000-2001	Colorado Animal Health Center planning committee
2004-present	Animal Population Health Institute – Board of Directors
2005-present	Admissions Committee

### Department

1989	Ad Hoc Residency Review Committee
1991-1994	Resident/Graduate Committee (Chairman, 1993-1994)
1996	Ad Hoc Committee on Surgery and Anesthesia Training
2002-present	Departmental Advisory committee
2002-2005	Faculty Evaluation committee

### Hospital

1988-90	Research Committee
1988-92	Central Supply Committee (Chairman, 1991-1992)
1996-98	Pharmacy and Therapeutics Committee
1997- present	VTH Development Committee

**RESEARCH REVIEW**

1993-2004 USDA, National Research Initiative Competitive Grants Program, Mechanisms of Animal Disease, ad hoc review panel.

**RESEARCH GRANTS****Funded**

1. Serum bile acid measurement as a test of liver function in cows with hepatic lipidosis. CSU Agricultural Experiment Station, PI, \$9,000, 1988.
2. Development of a fibrin-antibiotic complex as a biological carrier for local antibiotics. USDA Formula Funds, CSU, PI, \$20,000, 1988.
3. Renal function in diarrheic calves. CSU Agricultural Experiment Station, PI, \$15,500, 1989-1991.
4. Abnormal lipid utilization and liver dysfunction in dairy cattle. USDA Special Grants - Animal Health, Co-PI, \$125,000, 1989-1992.
5. Experimental eperythrozoonosis in llamas. International Llama Association, Co-I, \$5,000, 1990.
6. Characterization of llama erythrocytic indices in health and erythrocyte responses in anemias. International Llama Association, Co-I, \$5,000, 1990-1991.
7. Asphyxia in neonatal beef calves. College Research Council, CSU, PI, \$22,300, 1990.
8. Development of a bovine neonatal sepsis score. CSU Agricultural Experiment Station, PI, \$11,640, 1991.
9. Pulmonary hypertension in cattle as a predisposing factor in shipping fever pneumonia. College Research Council, CSU, CoI, \$13,440, 1991.
10. Assessment of dystocia - induced alterations decreasing calf survival. CSU Bovine research fund, PI, \$15,000, 1991.
11. Suspected retroviral infection as a cause of immunodeficiency in juvenile llamas. Morris Animal Foundation, PI, \$18,773, 1991-1992.
12. Development of an enhanced bovine colostrum substitute. CSU Agricultural Experiment Station, PI \$14,000, 1992-1993.
13. Epidemiologic characterization of juvenile llama immunodeficiency. College Research Council, CSU, PI, \$20,000, 1993.
14. Epidemiologic characterization of juvenile llama immunodeficiency. Morris Animal Foundation, PI, \$59,528, 1993-1996.
15. Increasing efficiency of immunoglobulin absorption from bovine colostrum supplement. CSU Agricultural Experiment Station, PI, \$20,000, 1994-1995.
16. Therapeutic enhancement by psyllium of oral fluid therapy for diarrheic calves. CSU Ag Exp Station, Co-I, \$22,000, 1995-1996.
17. Late term in-utero growth and energy metabolism in calves produced by nuclear transfer cloning. CSU Ag Expt Station, PI, \$34,300, 1996-1998.
18. The effects of water sulfate content on ruminal H<sub>2</sub>S generation, health and performance of feedlot cattle. CSU Ag Expt Station. Co-I, \$12,000, 1996-97.
19. In vitro and in vivo evaluation of gentamicin impregnated polylactic acid beads. CSU Ag Expt Station. Co-I, \$14,500, 1996-97.
20. An IRM approach to addressing the current downturn in the beef cattle market. CSU Integrated Resource Management. Co-I, \$30,408, 1996-1998.
21. The effects of water sulfate content on ruminal H<sub>2</sub>S generation, health ,and performance of feedlot cattle. CSU Integrated Resource Management. Co-I, \$2,500, 1996-97.
22. Bacteremia in coliform mastitis. CVMBS College Research Council. Co-I, \$28,718, 1997-98.
23. The occurrence of hazardous sulfur conditions on cow-calf operations in the United States. CSU Ag Expt Station. Co-I, \$10,000, 1997-98.
24. Characterization of E. coli strains from naturally occurring cases of coliform mastitis using DNA fingerprinting, serotyping and toxin gene mapping. CVMBS College Research Council. Co-I, \$16,690, 1998-99.
25. Epidemiology and economics of Johne's disease in Colorado dairies. CVMBS College Research Council. PI, \$27,942, 1998-99.
26. Use of ionizing radiation to kill M. paratuberculosis in contaminated raw milk. CVMBS College Research Council. Co-I, \$14,120, 1998-99.

27. National Animal Health Monitoring System: Cattle health and management. USDA:APHIS:VS. PI, \$16,000, 1998-99.
28. Acute interstitial pneumonia of feedlot cattle. CSU Ag Expt Station. Co-I, \$27,464, 1999-2000.
28. Re-evaluation of the molecular characteristics of *Mycobacterium paratuberculosis*. CVMBS College Research Council. Co-I, \$30,589, 1999-2000.
29. Interdisciplinary program in Johne's disease research. CSU Ag Expt Station. Co-I, \$95,065, 1999-2001.
30. National Animal Health Monitoring System: Cattle health and management. USDA:APHIS:VS. PI, \$32,000, 1999-2000.
31. Evaluation of potential false positive and negative results obtained from *Mycobacterium paratuberculosis* ELISA performed on dairy cattle serum. CSU Ag Expt Station. Co-I. \$31,300, 2000-01.
32. Detection of *Mycobacterium avium* subspecies *paratuberculosis* in intestinal and extraintestinal lesions of cows by fluorescence in-situ hybridization. CSU Ag Expt Station. Co-I. \$24,000, 2000-01.
33. A diagnostic strategy for the early and rapid detection of paratuberculosis infection in cattle. CSU Ag Expt Station. Co-I. \$24,000, 2000-01.
34. Economic and clinical impacts of coliform mastitis in dairy cattle. Merial Limited. Co-I. Joint project with DUO Dairy Ltd. \$75,100. 2000-01.
35. On-Line market cattle food safety education. American Distance Education Consortium. Co-I. Joint project with UC-Davis. \$20,000, 2000-01.
36. Production losses and economic costs associated with dystocia in Colorado dairies. CSU Ag Expt Station. PI. \$25,000, 2001-2002.
37. Dairy beef: Maximizing quality and profits. American Distance Education Consortium. Co-I. Joint project with UC-Davis. \$60,000, 2001-03.
38. Characterization of the innate immune system of the mammary gland of dairy cattle. CVMBS College Research Council, Co-I, \$12,000, 2002-2003.
39. Modifying progesterone secretion to improve fertility in dairy cattle. CVMBS College Research Council, PI, \$26,000, 2002-2003.
40. Worker Safety Education: Current Status and Future Needs in the Colorado Dairy Industry. Colorado Injury Control Research Center. Co-I, \$15,000. 2002-2003.
41. Johne's disease demonstration herd project for State of Colorado. USDA:APHIS:VS. PI, \$190,590, 2003-2004.
42. Johne's Disease Demonstration Herd Project for State of Colorado Year 2. USDA:APHIS:VS. PI, \$164,643, 2004-2005.
43. Comparison of passive immunoglobulin transfer, preweaning morbidity and mortality in dairy calves fed colostrum lyophilized or spray dried colostrum supplements. Immucell Corp, Co-I, \$5,000, 2004.
44. Johne's Disease Demonstration Herd Project for State of Colorado Year 3. USDA:APHIS:VS. PI, \$175,784, 2005-2006.
45. Epidemiologic analysis of adult cow mortality on a Colorado dairy. CVMBS Bovine Research Fund, PI, \$26,000, 2005-2006.
46. Post-mortem studies on dairy cattle with suspected *Mycobacterium avium* ssp *paratuberculosis* infection: Evaluation of testing strategies. USDA:APHIS:VS. Co-PI, \$27,660, 2005-2006.

#### **RESEARCH PROPOSALS (recently submitted, not funded)**

High mortality rates in adult dairy cows: Causes and epidemiology. USDA NRI-CGP. PI, \$363,081, submitted 2005.

Identification of Tissues Infected in and Evaluation of Ante-mortem Tests for Disseminated Paratuberculosis Infection in Dairy Cattle. USDA NRI-CGP. Co-PI, \$366,747, submitted 2005.

#### **PRESENTATIONS**

1. Nutritional causes of forestomach disease in the calf. Food Animal Shortcourse, The Ohio State University, December 5-6, 1985.
2. Johnes disease; Bovine leukosis; Bluetongue. Kentucky Veterinary Medicine Association, Morehead Clinic Day, Morehead, Kentucky, June 22, 1986, 3 hr lecture.
3. Comparison of naturally occurring duodenal obstruction and abomasal volvulus in cattle. 22nd Annual Meeting of the ACVS, San Antonio, Texas, February 4-6, 1987.

4. Anion gap as a prognostic index for cows with abomasal volvulus. 22nd Annual Meeting ACVS, San Antonio, Texas, February 4-6, 1987.
5. Anion gap and bovine gastrointestinal obstruction. ACVIM 5th Annual Forum, San Diego, California, May 21-24, 1987.
6. Rumen physiology in health and disease. Annual Meeting, New York State Veterinary Medical Society, Albany, New York, September 18-21, 1987.
7. Medical problems in llamas. Llama Medicine Workshop. Colorado Veterinary Medical Association, Fort Collins, Colorado, January 13-15, 1988, 1 hr lecture.
8. Pulmonary artery banding for the treatment of ventricular septal defects in cattle. ACVS 23rd Annual Meeting, Tucson, Arizona, February 3-5, 1988.
9. Renal clearance and fractional excretion of electrolytes in sheep. ACVIM 6th Annual Forum, Washington, DC, May 26-29, 1988.
10. Llama anatomy, physiology and behavior. Denver Museum of Natural History, Denver, Colorado, June 15, 1988.
11. Bovine hindlimb lameness; Bovine forestomach disease; Basics of llama medicine. Mid-Atlantic States Veterinary Clinic, Timonium, Maryland, May 11, 1989, 3 hr lecture.
12. Serum bile acids as a test of liver function for cattle with hepatic lipidosis. ACVIM 7th Annual Forum, San Diego, California May 25-28, 1989.
13. Comparison of changes in liver function, liver fat infiltration, serum lipid concentrations, body condition score and health in dairy cattle. Seventh ICPD, Ithaca, New York, July 25-27, 1989.
14. Serum bile acid measurement for evaluation of liver function in dairy cattle. Seventh ICPD, Ithaca, New York, July 25-27, 1989.
15. Bovine lameness examination; Lameness of the proximal hind limb in cattle; Arthritis in cattle. Annual Convention, North Dakota Veterinary Medical Association, Fargo, North Dakota, August 13-16, 1989, 4 hr lecture.
16. Diagnosis and treatment of fatty liver in dairy cows. Eastern States Veterinary Conference, Orlando, Florida, January 13-18, 1990, 2 hrs.
17. Clinical examination and diagnostic procedures in llamas. Eastern States Veterinary Conference, Orlando, Florida, January 13-18, 1990.
18. Ruminant disorders in cows and calves. 90th Penn Annual Conference, Philadelphia, Pennsylvania, January 24, 25, 1990, 3 hrs.
19. Indigestion in calves. ACVIM 8th Annual Forum, Washington, DC, May 10-13, 1990.
20. High-risk neonatal llamas. Rocky Mountain Llama Association, Longmont, CO, September 28, 1990, 1 hr.
21. Antemortem diagnosis of Johne's disease and BVD in cattle. Colorado State University 52nd Annual Conference for Veterinarians, Fort Collins, CO, January 12-15, 1991.
22. Body condition scoring in dairy cattle throughout the production cycle. Colorado Dairy Day, Greeley, Colorado, January 24, 1991.
23. Concepts of Llama Health Care. Kansas State University Llama Conference, Manhattan, Kansas, February 23, 1991. 4 hrs.
24. Dairy management and herd health. NAHMS Coordinator Workshop, Fort Collins, CO, February 12, 1991. 3 hrs.
25. Llama neonatal medicine. Llama Medicine Workshop, Fort Collins, CO, March 15, 1991. 2 hrs.
26. Blood parameter alterations in perinatal beef calves. ACVIM 9th Annual Forum, New Orleans, LA, May 30-June 2, 1991.
27. Immunoglobulin assessment in llamas, Red blood indices in llamas, Immunodeficiency in llamas, High risk newborn llamas. International Llama Association Conference, Spokane, WA, June 12-16, 1991. 6 Hours.
28. Problems with immune function in llamas. Llama Association of North America Annual Conference, Estes Park, CO, August 22-24, 1991. 2 Hours.
29. Causes, treatment and prevention of calf scours. Integrated Resource Management Workshops, Colorado, September 9-13, 1991.
30. Recognition and management of problems in neonatal calves: Resuscitation of the newborn calf; Care of the slow starter; Management of calf scours. Colo Vet Med Assoc Annual Conference, Steamboat Springs, CO, September 18, 1991, 2 hrs.

31. Prevention of neonatal beef calf losses. Colorado Veterinary Medical Association Continuing Education; coordinator 8 hr Short Course, lecturer 4 hrs. Fort Collins, CO, December 13, 1991.
32. Prevention and management of calf scours; calving management. Southern Colorado Beef Cattle Workshop, Pueblo, CO, January 28, 1992, 2 hrs.
33. Rational antibiotic therapy for bovine respiratory disease. Colorado State University 53rd Annual Conference for Veterinarians, Fort Collins, CO, January 4-7, 1992, 1 hr.
34. Beef calf scours: diagnosis and management. Tri River Area Agricultural Clinic and Trade Show, Montrose, CO, January 29, 1992, 1 hr.
35. Management of dystocia; care of the healthy and compromised neonatal calf. Tenth Annual 4-Corners Beef Cattle Symposium, San Juan Basin Research Center, Hesperus, CO, February 18, 1992, 2 hrs.
36. Feeding the pre and postpartum dairy cow to prevent disease. Colorado State University Continuing Education Dairy Program, Greeley, CO, March 3, 1992, 1 hr.
37. Easy, quick and economical fluid administration for scouring calves. XXV AABP Conference, St. Paul, MN, Aug 31 - Sept 4, 1992.
38. Care of the neonatal calf. 3rd International Vet Emerg and Critical Care Symposium, San Antonio, TX, Sept 20-23, 1992, 1 hr.
39. Fluid disturbances and treatment in bovine GI disease. 3rd International Vet Emerg and Critical Care Symposium, San Antonio, TX, Sept 20-23, 1992, 2 hrs.
40. Colic assessment in the llama. 3rd International Vet Emerg and Critical Care Symposium, San Antonio, TX, Sept 20-23, 1992, 2 hrs.
41. Neonatal ruminants: critical care support of calves and llamas. 3rd International Vet Emerg and Critical Care Symposium, San Antonio, TX, Sept 20-23, 1992.
42. Llama examination and critical care techniques, dry lab. 3rd International Vet Emerg and Critical Care Symposium, San Antonio, TX, Sept 20-23, 1992, 4 hrs.
43. Management of body condition and feed energy in high producing dairy cows. Weld County Dairy Shortcourse, Greeley, CO, March 2, 1993, 2 hrs.
44. Management of the post-partum cow. 1st Western Large Herd Dairy Management Conference, Las Vegas, NV, April 22-24, 1993.
45. Assessment of colic in llamas. ACVIM 11th Annual Forum, Washington, DC, May 20-23, 1993, 1 hr.
46. Enhancing Survival of the Neonatal Calf. Practitioner Food Animal Shortcourse, Royal (Dick) College of Veterinary Studies, Edinburgh, Scotland, July 6, 1993, 6 hrs.
47. Neonatal septicemia of calves: New thoughts on diagnosis and treatment. William Dick Bicentenary Symposium, Edinburgh, Scotland, July 7-10, 1993.
48. Abdominal disorders of dairy cows: Adjuncts to surgical therapy. William Dick Bicentenary Symposium, Edinburgh, Scotland, July 7-10, 1993.
49. Ruminant lipid metabolism in the periparturient period. 3rd International Conference on Veterinary Perinatology, Davis, CA, July 18-20, 1993.
50. The spectrum of disease in neonatal calves. 3rd International Conference on Veterinary Perinatology, Davis, CA, July 18-20, 1993.
51. Clinical aspects of acidosis in neonatal calves. 3rd International Conference on Veterinary Perinatology, Davis, CA, July 18-20, 1993.
52. Juvenile llama immuno deficiency syndrome. 19th Annual Food Anim Med Conf, Columbus, OH, November 4-5, 1993.
53. Llama colic. 19th Annual Food Anim Med Conf, Columbus, OH, November 4-5, 1993.
54. Calf scours prevention and treatment. Range Beef Cow Symposium XIII, Laramie, WY, Dec. 6-8, 1993.
55. Abomasal physiology and disease. Societe Francaise de Buiatrie. XX Annual Meeting, Paris, France, Dec 15-16, 1993.
56. Management of calf scours. Colorado State University 55th Annual Conference for Veterinarians, Fort Collins, CO, January 8-11, 1994.
57. Nutritional demands of the neonatal calf. Colorado Dairy Nutrition Conference. Greeley, CO, Jan 25, 1994.
58. Differential diagnosis and treatment of neonatal diarrhea; Colostrum - why does it fail; Enhancing survival of the newborn calf; Subcutaneous fluids - an adjunct therapy; Therapeutic strategies for toxic mastitis; Intravenous catheterization of llamas; Small ruminant interactive case presentations. N Am Vet Conf, Orlando, Florida, January 14-18, 1995, 7.5 hrs.

59. Identification and treatment of coliform mastitis. Colorado Dairy Days, January 25, 1995.
60. Colostral management: How good is your program? Second Western Large Herd Health Management Conference, Las Vegas, NV, April 6-8, 1995.
61. Enhancing dairy calf health - How colostrum works; Physiological problems of newborn calves; Newborn calf infectious disease; Body fluid imbalances in the newborn calf. Australian Association of Cattle Veterinarians, Annual Meeting, Melbourne, Australia, May 21-26, 1995.
62. Management factors to improve health in newborn calves.
  1. Range Beef Cow Symposium XIV, Gering, NE, Dec 5-7, 1995.
  2. Cow-calf producers' clinic. Eastern Colorado Research Center, Akron, CO, Jan 31, 1996.
  3. Integrated Resource Management, Beef Cattle Workshops, Yuma, CO, Feb 12, 1996; La Junta, CO, Feb 15, 1996.
63. Postnatal characteristics of calves produced by nuclear transfer cloning. International Embryo Transfer Society, XXII Annual Meeting, Salt Lake City, Utah, January 7-9, 1996.
64. Neonatal calf resuscitation; Fluid therapy in bovine practice; colostrum supplements; cow-side blood chemistry analysis. N Am Vet Conf, Orlando, Florida, January 13-17, 1996, 3 hrs.
65. Understanding laminitis in dairy cows. Colorado Dairy Nutrition Conference, Greeley, CO, January 23, 1996.
66. Large animal internal medicine issues. Am Assoc Vet Clinicians Annual Meeting, San Antonio, TX, May 22, 1996.
67. The ideal food animal training program. Am Assoc Vet Clinicians Annual Meeting, San Antonio, TX, May 22, 1996.
68. Whither the food animal internist in the 21st century? ACVIM 14th Annual Forum, San Antonio, TX, May 23-26, 1996.
69. Blood chemistry analysis in cattle. AABP 29th Annual Conference, San Diego, CA, Sept. 12-14, 1996.
70. Newborn calf physiological problems; Management to improve calf survival; Newborn calf infectious disease problems; Case discussions with Salmonella, Johne's disease, and BVD as differentials; High mountain disease diagnosis and treatment. CVMA 90th Annual Convention, Breckenridge, CO, Sept. 15-18, 1996, 7 hrs.
71. Cow-side blood analysis. CSU 58<sup>th</sup> Annual Conf for Veterinarians, Fort Collins, CO, Jan. 4, 1997.
72. Management to improve calf survival. Cattle production meeting, Limon, CO, Jan. 23, 1997. 4 hrs.
73. Nutritional risk factors for abomasal displacement. Colorado Dairy Nutrition Conf, Greeley, CO, Jan. 28, 1997.
74. Johne's disease - a critical disease for dairymen to understand. Colorado Dairy Days, Greeley, CO, Jan. 30, 1997.
75. Biosecurity in beef feedlots and its relevance to quality assurance. Washington Cattle Feeders Assoc, 37th Ann Convention, Pasco, WA, March 15, 1997.
76. Field friendly diagnostics for llamas. CSU Camelid Workshop For Veterinarians, Fort Collins, CO, March 16, 1997.
77. Future of large animal internal medicine. ACVIM 15th Annual Forum, Orlando, FL, May 22-25, 1997.
78. Adaptation of newborn calves to extrauterine life. ACVIM 15th Annual Forum, Orlando, FL, May 22-25, 1997.
79. Newborn calf physiology; Assessment and management of compromised newborns; Newborn calf immune function; Infectious diseases of calves less than 3 weeks old; Diseases of calves through weaning and beyond. ABVP Practitioner's Symposium, Chicago, IL, June 7-8, 1997, 8 hrs.
80. Integrated Livestock Management at CSU, 58<sup>th</sup> Ann Conf Vet, Fort Collins, CO, Jan. 10, 1998.
81. U.S. dairy biosecurity; Non-fed beef audit / Issues in animal handling; Ruminant energy metabolism; Methods for bovine euthanasia; Reconsidering Johne's disease in dairy cows. N Am Vet Conf, Orlando Florida, January 11-14, 1998, 5 hrs.
82. Johne's disease and the Colorado Dairy Industry; Implications of the Non-Fed Beef Audit for dairy producers. Colorado Dairy Days, Greeley, CO, Jan. 28, 1998.
83. Dairy biosecurity; Therapeutic management of toxic mastitis; Johne's disease in dairy cows; Newborn calf physiologic disturbances; Newborn calf infectious diseases; Colostrum and herd health; Bovine euthanasia. Western Veterinary Conference, Las Vegas, Nevada, Feb 2-3, 1998, 6 hrs.
84. Newborn calf health and immunity. NCBA Cattlemen's College, Denver, CO, Feb 4, 1998
85. Injection site blemishes and beef quality assurance. Pharmacia and Upjohn Annual Training Meeting, Phoenix, Arizona, June 16, 1998, 4 hrs.

86. Emerging opportunities for the dairy practitioner of tomorrow: Biosecurity, Johne's disease, Quality management, Coliform mastitis, Newborn calf health. Vermont Veterinary Medical Association Annual Meeting, Basin Harbor, Vermont, June 25-26, 1998, 9 hrs.
87. Microbial food safety risks - Veterinarian's perspective on preharvest pathogen control. NCBA Summer Conference, Beef Safety Committee, Denver, CO, July 18, 1998.
88. Reconsidering Johne's disease; Dairy biosecurity; Coliform mastitis management; Newborn calf physiologic disturbances; Newborn calf infectious diseases. Central Veterinary Conference, Kansas City, Missouri, Aug 29 - 31, 1998, 5 hrs.
89. Dairy biosecurity; Johne's disease in cattle; Newborn calf physiologic and infectious diseases. Auburn University Annual Veterinary Conference, Auburn, Alabama, Oct 16 - 18, 1998, 6 hrs.
90. Embryo manipulation, fetal growth and neonatal adaptation; Physiological problems of newborn calves. Society for Theriogenology Annual Meeting, Baltimore, Maryland, December 6, 1998, 2 hrs.
91. Johne's disease in cattle and it's potential public health significance. Colorado Department of Public Health, Consumer Protection Division. Denver, CO, December 17, 1998.
92. Symposium: Practitioners' workshop on Johne's disease. North American Veterinary Conference, Orlando, Florida, January 9-10, 1999. Coordinator and teacher, 2-day interactive workshop.
93. Dairy quality assurance programs, Care of dystocia calves, Coliform mastitis treatment strategies. North American Veterinary Conference, Orlando, Florida, January 11-13, 1999, 3 hrs.
94. Johne's disease and the dairy industry. Western Dairy Conference, Denver, CO, March 17-19, 1999.
95. Ten myths about Johne's disease. Fourth Western Dairy Management Conference, Las Vegas, NV, April 8-10, 1999.
96. Classification of mastitis severity and treatment decisions. North American Coliform Mastitis Mini-Symposia, Denver, CO, April 20-21, 1999.
97. Johne's disease and biosecurity in bovine practice. Nebraska Veterinary Medical Assn, Summer Meeting, North Platte, NE, June 16-18, 1999, 2 hrs.
98. Quality assurance, biosecurity, and food safety. NCBA Summer Conference, Cattlemen's College, Denver, CO, July 18, 1999.
99. USDA Training on Johne's Disease Epidemiology. USDA:APHIS:VS, Centers for Epidemiology and Animal Health, Fort Collins, CO, Coordinator and teacher, 3-day interactive workshop, August 10-12, 1999.
100. Injection site problems in cattle. Pharmacia and Upjohn Beef Quality Forum, Telecast from Fort Worth, Texas, August 18, 1999.
101. Johne's disease in cattle and it's potential public health significance. Western Association of Food and Drug Officials, Annual Conf, Denver, CO, September 14, 1999.
102. Johne's disease. Chapter 14 of Colorado Vet Med Assoc, Pueblo, CO, October 21, 1999.
103. Embryo manipulation, growth, and implications for newborn calves. American Embryo Transfer Association, 18<sup>th</sup> Ann Convention, Colorado Springs, CO, October 22, 1999, 2 hrs.
104. Post-graduate food animal veterinary education; Effects of embryo manipulation on fetal development and calf survival. Ohio State University, 25<sup>th</sup> Annual Food Animal Medicine Conf, Columbus, OH, October 23-24, 1999, 2 hrs.
105. Update on quality assurance, biosecurity and food safety for bovine practitioners. CSU 61st Annual Conf for Veterinarians, Fort Collins, CO, Jan. 9, 2000, 2 hrs.
106. Dairy quality assurance programs, Johne's disease and biosecurity in bovine practice, Newborn calf physiologic and infectious diseases. Virginia Vet Med Assoc 2000 Ann Conv, Hot Springs, VA, Feb 5, 2000, 6 hrs.
107. Johne's disease and biosecurity. Oregon Dairy Farmers Assoc, Annual Convention, Feb 15, 2000, 2 hrs.
108. Integrating animal agriculture programs, Update on Johne's disease, Bulk tank milk quality. Western Dairy Extension Specialist's Meeting, Pingree Park, CO, June 19-22, 2000, 2.5 hrs.
109. USDA Training on Johne's Disease Epidemiology. USDA:APHIS:VS, Centers for Epidemiology and Animal Health, Fort Collins, CO, Coordinator and teacher, 3-day interactive workshop, June 27-29, 2000.
110. Integrating animal agriculture training programs. Texas A&M Symposium on Informatics, College Station, TX, Aug 28, 2000, 1hr.
111. Rethinking the management of acute coliform mastitis. Northeast Veterinary Dairy Symposium, Skytop PA, Aug 29-31, 2000, 2 hrs.

112. Forestomach diseases of cattle, diarrheal disease, diagnosis and treatment of sick neonatal calves, use of colostral supplements, hemorrhagic bowel syndrome of cattle. North American Veterinary Conference, Orlando, Florida, January 13-17, 2001, 5.5 hrs.
113. Replacement heifer biosecurity, housing and health, Dairy cattle welfare. Colorado Dairy Days, Greeley, CO, Jan. 24-25, 2001, 1.5 hrs.
114. Johne's disease epidemiology, management, and control: training for Florida Johne's disease program. Orlando, FL, Coordinator and teacher, 1.5 day interactive workshop, March 6 and 7, 2001.
115. Stopping disease before it takes hold. Fifth Western Dairy Management Conference, Las Vegas, NV, April 4-6, 2001.
116. Incorporating biosecurity into bovine practice; Johne's disease testing and control. KSU 63<sup>rd</sup> Annual Conf for Veterinarians, Manhattan KS, June 3-6, 2001, 4 hrs.
117. Upcoming issues concerning Johne's disease. Acad Vet Consult, Summer Mtg, Colorado Springs, CO, July 27, 2001.
118. Managing for optimal dairy heifer health. Northeast Veterinary Dairy Symposium, Cooperstown, NY, October 29-31, 2001, 4 hrs.
119. Preventing respiratory disease in feedlot cattle. Feedyard Profitability Conf., Fort Collins, CO, Nov 8, 2001.
120. Managing infectious diseases on dairies. Southwest Nutrition and Management Conf, Phoenix, AZ, Feb 21, 2002.
121. Mastitis in dairy cows, Management for quality production of dairy calves. Northwest Veterinary Continuing Education, St. Albans, Vermont, March 14, 2002, 4 hrs.
122. Managing the newborn calf, Quality assurance and biosecurity. Twin Forks Beef Producer Education, Benkelman, Nebraska, April 8, 2002, 2 hrs.
123. Quality management of newborn dairy calves. Great Lakes Dairy Conference. Maumee Bay, Ohio, April 30-May 2, 2002, 2 hrs.
124. USDA Johne's Disease Coordinator Training. USDA:APHIS:VS, Centers for Epidemiology and Animal Health, Fort Collins, CO, Coordinator and teacher, 3-day interactive workshop, May 7-9, 2002.
125. On-farm necropsy, Update on Johne's disease in Colorado. Colorado Livestock Association Annual Meeting, Copper Mountain, CO, August 7-9, 2002.
126. Carcass disposal risks. Colorado Bio-waste Disposal and Utilization Committee meeting, CSU Ag Rsch Devel, and Education Center, August 28, 2002.
127. On-farm necropsy, Increasing newborn calf survival. Watertown Dairy Education Meeting, Watertown, NY, Nov 25-26, 2002, 4 hrs.
128. Biological hazards from carcass disposal. Adams, Boulder, Weld County Coop Ext meeting, Longmont, CO, Dec 7, 2002.
129. Occurrence of environmental mastitis infections in dairy cows during the dry period. Colorado Dairy Days, Greeley, CO, Jan. 29, 2003, 1 hr.
130. Infectious disease management in beef cattle. 2003 Intervet Summer Veterinary Seminars, Deadwood, SD, June 25, 2003, 2 hrs.
131. USDA Johne's Disease Coordinator Training. USDA:APHIS:VS, College Station, TX, Instructor, 3-day interactive workshop, August 5-7, 2003.
132. Encouraging large dairy herds to participate in Johne's disease control programs. Designated Johne's Coordinator meeting, USAHA Annual Meeting, San Diego, CA, Oct 9, 2003.
133. Zoonotic disease and pathogen risks from animal carcasses. Biowaste Disposal Conference, CSU Cooperative Extension, Denver, CO, Dec 18, 2003.
134. Johne's disease in beef cattle and the Colorado Johne's control program. Mountain States Texas Longhorn Assoc Ann Conf, Denver, CO, March 6, 2004.
135. Why dairy producers should invest in Johne's disease control. Maine Dairy Producers Association meeting, Waterville, Maine, March 16, 2004.
136. Quality Assurance approaches to dairy production, Biosecurity, Johne's disease management and testing issues, Newborn calf management. Maine Cattle Health Assurance Program Meeting, Waterville, Maine, March 17, 2004. 6 hr
137. USDA Johne's Disease Coordinator Training. USDA:APHIS:VS, Madison, WI, Instructor, 3-day interactive workshop, April 19-21, 2004.

138. Monitoring disease and incorporating necropsy into dairy practice, Enhancing survival and health of dairy calves. Wild West Veterinary Conference, Reno, Nevada, October 9, 2004. 4 hr.
139. Johne's Disease Workshop. Dealing with JD in beef herds, Test negative status program, practical application of biosecurity, JD cases in dairy herds. North American Veterinary Conference, Orlando, Florida, January 8-9, 2005. 4 hr.
140. Infectious disease problems on dairy farms. Connecticut Dairy Seminar, Vernon, CT, March 14, 2005. 2 hr.
141. Infectious disease problems on dairy farms. New Hampshire Dairy Management Conference. West Lebanon, NH, March 15, 2005. 2 hr.
142. Enhancing calf survival and health. Coos County, NH and Essex County VT Dairy Seminar and Trade Show, Lancaster, NH, March 16, 2005. 2 hr.
143. Enhancing calf survival and health. Maine Dairy Industry Association meeting, Waterville, Maine, March 17, 2005. 2 hr.
144. Newborn calves, the future of the dairy. Wisconsin Dairy Producer Weekend, Sturgeon Bay, WI, April 8-9, 2005, 4 hr.
145. USDA Johne's Disease Coordinator Training. USDA:APHIS:VS, Albuquerque, NM, Instructor, 2-day interactive workshop, April 19-20, 2005.
146. Potential threats to dairy marketing. Food Systems Insider Advisory meeting, Kansas City, KS, April 27, 2005, 2hr.
147. USDA Johne's Disease Coordinator Training. USDA:APHIS:VS, Syracuse, NY, Instructor, 2-day interactive workshop, May 24-26, 2005.
148. Public investment at the interface of dairy cow health and human food safety. Dairy Food Systems Tour, Colorado State University, CO, July 12, 2005.
149. Changing perspectives on coliform mastitis. Dairy Wellness Symposium, LaCrosse, WI August 24, 2005.
150. USDA Advanced Johne's Disease Coordinator Training. USDA:APHIS:VS, Raleigh, NC, Instructor, 2-day interactive workshop, Sept 13-14, 2005.
151. Enhancing Dairy Calf Health and Survival. Cornell Fall Dairy Conference. Auburn, NY. November 10-11, 2005. 4 hr.
152. Who's afraid of the big bad bug? Advances in Clinical Research seminar series, Department of Clinical Sciences, CSU Veterinary Teaching Hospital, Fort Collins, Nov 28, 2005.

### **Integrated Livestock Management Producer Seminars**

#### **Dairy**

1. June 1996 - Lameness in Dairy cattle, Fort Collins, CO
2. April 18, 1997 - Respiratory disease: recognition, vaccination considerations, Fort Collins, CO
3. June 13, 1997 - Issues concerning newborn calf health, Fort Collins, CO
4. April 28, 1998 - Care of the dam and calf after delivery, Greeley, CO
5. July 14, 1998 - Reconsidering Johne's disease in dairy cows, Greeley, CO
6. July 23, 1998 - Reconsidering Johne's disease in dairy cows, Fort Morgan, CO
7. October 20, 1998 - Johne's disease and Colorado dairies, Fort Collins, CO
8. October 21, 1998 - Johne's disease and Colorado dairies, Brighton, CO
9. October 22, 1998 - Johne's disease and Colorado dairies, Greeley, CO
10. October 27, 1998 - Johne's disease and Colorado dairies, Fort Morgan, CO
11. November 23, 1998 - Johne's disease and Colorado dairies, Delta, CO
12. December 10, 1998 - Johne's disease and Colorado dairies, Yuma, CO
13. April 25, 2001 – Emerging dairy disease issues – FMD, BSE, HBS, Greeley, CO
14. July 2, 2002 – Dairy calving management, Fort Collins, CO
15. July 31, 2002 - Dairy calving management, Fort Collins, CO
16. November 5, 2002 - Dairy calving management, Fort Collins, CO
17. March 11, 2003 – Dairy market cow quality assurance, Fort Collins, CO

#### **Beef**

1. August 1996 - Feedlot Cowboy Workshop: Respiratory Disease, Fort Collins, CO
2. March 13, 1997 - Feedlot Cowboy Workshop: Respiratory Disease, Moses Lake, WA
3. March 14, 1997 - Feedlot Cowboy Workshop: Respiratory Disease, Pasco, WA

4. July 11, 1997 - Feedlot Cowboy Workshop: Respiratory Disease, Fort Collins, CO
5. July 14, 1997 - Feedlot Cowboy Workshop: Respiratory Disease, Fort Collins, CO
6. October 7, 1997 - Feedlot Cowboy Workshop: Respiratory Disease, Vernon, BC
7. June 16, 1998 - Injection site lesions and quality assurance, Phoenix, AZ
8. August 2, 1999 – Feedlot Cowboy Respiratory Disease Workshop, Fort Collins, CO
9. January 11, 2000 – Diagnostic Techniques for Feedlot Cattle, Fort Collins, CO
- 10 August 14,2000 - Feedlot Cowboy Workshop: Respiratory Disease, Fort Collins, CO
11. August 7,2001 - Feedlot Cowboy Workshop: Respiratory Disease, Fort Collins, CO

#### **Integrated Livestock Management Producer Education**

1. Dairy Cattle Necropsy Manual – Web based training module, on-line at <http://www.cvms.colostate.edu/ilm/outreach/necropsy/notes/INDEX.HTML> August 2002
2. Dairy Beef: Maximizing Quality and Profits – Web based training module, on-line at <http://dairybeef.ucdavis.edu/> version 1, January 2003. Version 2.2 October 2004.
3. Calving and Calf Care on Dairy Farms – Web-based training module, on line at <http://www.cvms.colostate.edu/ilm/outreach/calving/notes/HOME.htm> June 2004
4. Dairy producer tour of livestock production in the European Union. 2week tour of livestock facilities and animal management systems. October 10-24, 2005.

#### **Integrated Livestock Management Veterinary Continuing Education**

1. December 11, 1999 - Basic Ultrasonography in Food Animals, Fort Collins, CO.
2. January 13,2003 – Johnes disease certification training for Colorado Veterinarians, Fort Collins, CO.
3. February 2004 – On-line Johnes Disease Veterinary Certificate Program. Collaborator in development of on-line training for JD certified veterinarians, available nationally to aid participation in JD control programs.

#### **PUBLICATIONS**

##### **Refereed articles**

- 1.Garry F, Kallfelz FA: Clinical aspects of dietary buffers for dairy cattle. *Comp Cont Educ Pract Vet* 1983;5:S159-167.
- 2.Garry F: Plasma fibrinogen measurement: prognostic value in calf bronchopneumonia? *Zentralblatt fur Veterinarmedizin A* 1984;31:361-369.
- 3.Baumgartner W, Zajac A, Hull BL, Andrews F, Garry F: Parelaphostrongylosis in llamas. *J Am Vet Med Assoc* 1985;187:1243-11245.
- 4.Garry F, St. Jean G, Rings DM: Manifestation atypique de L'arthrite encephalite caprine. *Le medecin Veterinaire du Quebec* 1986;16:65-69.
- 5.Dirksen GU, Garry F: Diseases of the forestomachs of calves, part I. *Comp Cont Educ Pract Vet* 1987;9:F140-F147.
- 6.Dirksen GU, Garry F: Diseases of the forestomach of calves, part II. *Comp Cont Educ Pract Vet* 1987;9:F173-180.
- 7.Garry F, Rings DM: Forestomach inactivity with recurrent bloat in a calf. *Comp Cont Educ Pract Vet* 1987;9:F272-F275.
- 8.Garry FB, Saint-Jean G, Rings DM, Ware W: Pulmonary valvular endocarditis in a cow. *Mod Vet Pract* 69:30-32, 1988.
- 9.Brown SA, Sugimoto K, Smith GG, Garry FB: Improved sodium hydroxide digestion method without homogenization for extraction of gentamicin from renal tissue. *Antimicrobial Agents and Chemotherapy* 1988;32:595-597.
- 10.Rings DM, Garry F: Renal amyloidosis associated with Johnes disease in sheep. *Comp Cont Educ Pract Vet* 1988;10:381-385.
- 11.Garry F, Hull BL, Kersting K, Rings DM, Hoffsis GF: Prognostic value of anion gap determination in cattle with abomasal volvulus. *J Am Vet Med Assoc* 1988;192:1107-1112.
- 12.Brooks CL, Garry F, Swartout MS: Effect of an interfering substance on determination of potassium by ion-specific potentiometry in animal urine. *Am J Vet Res* 1988;49:710-714.
- 13.Garry FB, Hull BL, Rings DM, Hoffsis GF: Comparison of naturally occurring duodenal obstructions and abomasal volvulus in cattle. *Vet Surg* 1988;17:226-233.

14. Brown SA, Garry FB: Comparison of serum and renal gentamicin concentrations with fractional urinary excretion tests as indicators of nephrotoxicity. *J Vet Pharmacol Therap* 11:330-337, 1988.
15. Johnson GC, Kohn CW, Johnson CW, Garry F, Scott A, Martin S. Ultrastructure of junctional epidermolysis bullosa in Belgian foals. *J Comp Path* 1988;98:329-336.
16. Kohn CW, Johnson GC, Garry F, Johnson CW, Martin S, Scott DW: Mechanobullous disease in two Belgian foals. *Equine Vet J* 1989; 21(4):297-301.
17. Garry F, Chew AJ, Rings DM, Tarr MJ, Hoffsis GF: Renal excretion of creatinine, electrolytes, protein and enzymes in healthy sheep. *Am J Vet Res* 1990;51:414-419.
18. Garry F, Chew AJ, Hoffsis GF: Urinary indices of renal function in sheep with induced aminoglycoside nephrotoxicosis. *Am J Vet Res* 1990;51:420-427.
19. Garry F, Chew AJ, Hoffsis GF: Enzymuria as an index of renal damage in sheep with induced aminoglycoside nephrotoxicosis. *Am J Vet Res* 1990;51:428-432.
20. Powers BE, Johnson LW, Linton LB, Garry F, Smith J: Endometrial biopsy technique and uterine pathologic findings in the llama (*Lama glama*). *J Am Vet Med Assoc* 1990;197:1157-1162.
21. Garry FB, Klee W. Digoxin half-life and toxicity in calves. *Tierarztliche Umschau*, 1990;10:750-754.
22. Garry FB. Evaluating motility disorders of the bovine forestomach. *Vet Med* 1990;85:634-642.
23. Garry FB. Managing bloat in cattle. *Vet Med* 1990;85:643-650.
24. Garry FB. Managing forestomach problems caused by motor disease. *Vet Med* 1990;85:651-659.
25. Garry FB. Diagnosing and treating indigestion caused by fermentative disorders. *Vet Med* 1990;85:660-670.
26. Reagan WJ, Garry F, Thrall MA, Colgan S, Hutchison J, Weiser MG: The clinicopathological, light and scanning electron microscopic features of eperythrozoonosis in four naturally affected llamas. *Vet Pathol* 27:426-431, 1990.
27. Adams R, Holland M, Aldridge B, Garry FB, Odde KG. Arterial blood sample collection from the newborn calf. *Vet Res Comm*, 1991; 15(5):387-394.
28. Aldridge BA, Garry FB: Role of colostral transfer in neonatal calf management: Failure of acquisition of passive immunity. *Comp Cont Ed Pract Vet*, 1992;14:265-270.
29. Adams R, Garry FB, Holland MD, Aldridge BM, Odde KG. Hematologic values in newborn beef calves. *Am J Vet Res*, 1992; 53(6):944-950.
30. Van Houten D, Weiser MG, Johnson L, Garry F: Reference hematologic values and morphological features of blood cells in healthy adult llamas. *Am J Vet Res*, 1992;53(10):1773-1775.
31. Hutchison JM, Garry FB, Johnson LW, Quackenbush SL, Getzy DM, Jensen WA, Hoover EA. Immunodeficiency syndrome associated with wasting and opportunistic infection in juvenile llamas. *J Am Vet Med Assoc*, 1992;201(7):1070-1076.
32. Adams R, Garry FB. Gram negative bacterial infection in neonatal new world camelids. *J Am Vet Med Assoc*, 1992;201(9):1419-1424.
33. Weiser MG, Fettman MJ, Van Houten D, Johnson L, Garry F. Characterization of erythrocytic indices and serum iron values in healthy llamas. *Am J Vet Res*, 1992;53(10):1776-1779.
34. Morin DE, Garry FB, Weiser MG, Fettman MJ, Johnson LW. Hematologic features of iron deficiency anemia in llamas. *Vet Pathol*, 1992;29:400-404.
35. Aldridge BA, Garry FB: Chronic partial obstructive urolithiasis causing hydronephrosis and chronic renal failure in a steer. *Cornell Veterinarian*, 1992;82:311-317.
36. Adams R, Garry FB, Aldridge BM, Holland MD, Odde KG: Physiologic differences between twin and single born beef calves in the first two days of life. *Cornell Veterinarian*, 1993;83:13-29.
37. Aldridge BA, Garry FB, Adams MR. Neonatal septicemia in calves: 25 cases (1985-1990). *J Am Vet Med Assoc*, 1993;203(9):1324-1329.
38. Garry FB, Aldridge BA, Adams R: Role of colostral transfer in neonatal calf management. Current concepts in diagnosis. *Comp Cont Ed Pract Vet*, 1993;15(8):1167-1175.
39. Morin DE, Garry FB, Weiser MG: Hematologic responses in llamas with experimentally-induced iron deficiency anemia. *Vet Clin Path*, 1993;22(3):81-86.
40. Garry FB, Fettman MJ, Curtis CR, Smith JA. Serum bile acid concentrations in dairy cattle with hepatic lipidosis. *J Vet Int Med* 1994;8(6):432-438.
41. Adams R, Garry FB, Holland MD, Odde KG: Clinicopathologic measurements in newborn beef calves experiencing mild to moderate degrees of dystocia. *Agri Pract*, 1995; 16(6): 5-11.

42. Cebra CK, Garry FB, Powers BE, Johnson LW: Lymphosarcoma in New World camelids: 10 cases. *J Vet Int Med*, 1995;9(16):381-385.
43. Hutchison JM, Salman MD, Garry FB, Johnson LW, Collins JK, Keefe, TJ: Comparison of two commercially-available single radial immunodiffusion kits: quantitation of llama immunoglobulin G. *J Vet Diagn Invest*, 1995;7:515-519.
44. Hutchison, JM, Garry FB, Belknap EB, Getzy DM, Johnson LW, Ellis RP, Quackenbush SL, Rovnak J, Hoover EA, Cockerell GL; Prospective characterization of the clinicopathologic and immunologic features of an immunodeficiency syndrome affecting juvenile llamas. *Vet Immunol Immunopathol*, 49:209-227, 1995.
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46. Garry FB, Adams R, McCann JP, Odde KG: Postnatal characteristics of calves produced by nuclear transfer cloning. *Theriogenology*, 45:141-152, 1996.
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2. Colorado Dairy News. Integrated Livestock Management dairy newsletter. Published 6x/yr. Editor and contributor. 1995-present.

3. Western Dairy News. Western states dairy specialist newsletter.  
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