

CURRICULUM VITAE

James A. Roth, DVM, PhD, DACVM
November 2016

Address:

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Personal Data:

Date of birth: March 1, 1951 Place of birth: Grinnell, Iowa
Spouse: Jeanne R. Roth
Children: Claire Elizabeth Roth, Born: 8-07-76
 David William Roth, Born: 1-23-80
 Emily Marie Roth, Born: 2-08-90

Education:

<i>Institution</i>	<i>Degree</i>	<i>Date</i>	<i>Major</i>
Iowa State University	D.V.M.	1975	Veterinary Medicine
Iowa State University	M.S.	1979	Veterinary Microbiology (Immunology)
Iowa State University	Ph.D.	1981	Veterinary Microbiology (Immunology)

Licensure:

Licensed to practice Veterinary Medicine in Iowa

Professional Experience:

1975-1977 Employed as a practicing veterinarian in a general veterinary practice in Belle Plaine, Iowa.

1977-1995 Adjunct Instructor, Instructor, Assistant Professor, Associate Professor, Professor, Department of Veterinary Microbiology and Preventive Medicine, College of Veterinary Medicine, Iowa State University, Ames, Iowa.

1987-2002 Professor-in-Charge, Ames Center for Animal Health (formerly the Center for Immunity Enhancement in Domestic Animals), Iowa State University, Ames, Iowa.

1990-1992 Professor and Interim Chairman, Department of Veterinary Microbiology and Preventive Medicine, (aka Department of Microbiology, Immunology, and Preventive Medicine), Iowa State University, Ames, Iowa.

1991-1994 Chairman, Biotechnology Research and Development Corporation, Animal Health Care Division, Scientific Advisory Board.

- 1993-2003 Board of Directors, Veterinary Resources, Inc., Ames, Iowa. Veterinary Resources, Inc. is a private company that conducts contract research and testing. It is an affiliate member of the Iowa State Innovation System at the ISU Research Park.
- 1995-Present Clarence Hartley Covault Distinguished Professor, Department of Veterinary Microbiology and Preventive Medicine, Iowa State University, Ames, Iowa.
- 1995-Present Executive Director, Institute for International Cooperation in Animal Biologics. An OIE Collaborating Center for Diagnosis of Animal Disease and Vaccine Evaluation in the Americas. The IICAB was jointly formed by Iowa State University, USDA/APHIS and USDA/ARS.
- 2001-2004 Assistant Dean of International Programs and Public Policy, College of Veterinary Medicine, Iowa State University, Ames, Iowa.
- 2002-Present Director, Center for Food Security and Public Health. Iowa State University
- 2006-Present Adjunct Professor, Department of Epidemiology, College of Public Health, University of Iowa, Iowa City, Iowa.
- 2008-Present President, Transboundary Animal Biologics, Inc., A not-for-profit corporation with a mission to enhance the availability of veterinary biologics for transboundary diseases.

Advisory Panels:

Federal:

- Interagency Weapons of Mass Destruction (WMD) Counter Measures Working Group – Animal Pathogens Research and Development Subgroup (2003-2004)
- White House Office of Science and Technology Policy (OSTP) Blue Ribbon Panel on the Threat of Biological Terrorism Directed Against Livestock (Dec 2003- March 2004), (Chair, Immunotherapeutics Working Group)
- National Science Advisory Board for Biosecurity (NSABB) (2005-2014 (Level 2 Secret Security Clearance)

Other:

- Project ARGUS Senior Advisory Board, Georgetown University, Washington, DC. (2008-2010)
- National Veterinary Stockpile Nipah Virus Countermeasures Workshop. Geelong, Victoria, Australia. March 17-19, 2009
- National Academies of Science, National Research Council Committee on Evaluation of a Site Specific Risk Assessment for the Department of Homeland Security’s Planned National Bio- and Agro-Defense Facility in Manhattan, Kansas. 2010
- National Academies of Science, National Research Council Committee on Evaluation of the Updated Site Specific Risk Assessment for the Department of Homeland Security’s Planned National Bio- and Agro-Defense Facility in Manhattan, Kansas. 2011-2012
- National Academies of Science, National Research Council, Institute for Laboratory Animal Research Advisory Council. 2011-2017

Invited Presentations, Washington DC:

“Review of Biosecurity Preparedness and Efforts to Address Agroterrorism”. Testimony before the US Senate Committee on Agriculture, Nutrition, and Forestry, Senate Russell Building, Washington, DC. July 20, 2005

"Our vulnerability to animal diseases: Zoonotic diseases and their potential for infecting humans", AAVMC/National Coalition for Food and Agriculture Research Seminar, Longworth House Office Building, Washington, DC. July 16, 2007.

“Biodefense, Agriculture, and Food Security: Progress, Vulnerabilities and Needs”, AAAS Center for Science, Technology and Security Policy; Understanding President Bush’s FY2009 Budget Request for Biodefense: Round Table Discussion, Rayburn House Office Building, Washington, DC. June 11, 2008.

“Impact of an Outbreak of Foot and Mouth Disease (FMD) in the United States and the Urgent Need for an Adequate Stockpile of FMD Vaccine”. Testimony before the U.S. House of Representatives Agriculture Subcommittee on Livestock and Foreign Agriculture, Longworth House Office Building, Washington, DC. February 11, 2016.

“Vulnerability of U.S. Animal Agriculture and Food Production to Accidental or Intentional Disease Introduction”. President’s Council of Advisors on Science and Technology. National Academy of Sciences Building, Washington, DC. November 18, 2016.

Honors and Awards:

Diplomate, American College of Veterinary Microbiologists, 1982
Norden Distinguished Teacher Award, Iowa State University, 1983
Outstanding Young Alumnus, Iowa State University, 1985
Beecham Award for Research Excellence, College of Veterinary Medicine, Iowa State University, 1986
Member: Phi Zeta, Gamma Sigma Delta, Phi Kappa Phi
Basic Science Teaching Award, Student Chapter American Veterinary Medical Association, Iowa State University, 1991, 1997, 2001
Norden Distinguished Teacher Award, Iowa State University, 1993
Faculty Citation, Iowa State University, 1993
Award for Mid-Career Achievement in Research, Iowa State University Foundation, 1994
Clarence Hartley Couvalt Distinguished Professor, Iowa State University, 1995
R&D 100 Award, SC-54 Vaccine, T. Kramer, M. Roof, and J. Roth, 1996
Distinguished Veterinary Immunologist Award, American Association of Veterinary Immunologists, 1997
John G. Salsbury Endowed Chair in Veterinary Medicine, 1998-2001
International Service Award, Iowa State University, 2000
AVMA 12th International Veterinary Congress Prize, 2001
Change Agent of the Year, Iowa State University Minority Student Association, 2004
AVMA Public Service Award, 2006
Distinguished Veterinary Microbiologist Award, American College of Veterinary Microbiologists, 2009
USDA APHIS Administrator’s Award for Contributions in Animal Health, 2013
Exemplary Faculty Mentor, Iowa State University, 2014
Elected to membership, National Academy of Medicine, 2016

Citation indices for J. A. Roth on Google Scholar (January 2016)

<u>Citation indices</u>	All	Since 2011
<u>Citations</u>	7173	2483
<u>h-index</u>	48	26
<u>i10-index</u>	150	68

Professional Organizations:

American Veterinary Medical Association

American Society for Microbiology,

Public and Scientific Affairs Board, Chair Agriculture and Food Committee (2015 to present)

American Association of Veterinary Immunologists (President, 1989)

American Association of Swine Veterinarians

American Association of Bovine Practitioners

Conference of Research Workers in Animal Disease

Iowa Veterinary Medical Association

Iowa Public Health Association

US Animal Health Association

American College of Veterinary Microbiologists, (Board of Governors, 1990-1993, 2001-2004;
President, 2004-2008)

International Association for Biologicals (Veterinary Scientific Conference Committee, 2001-2016)

National Institute for Animal Agriculture

Teaching Responsibilities:

VMPM 380. *Veterinary Immunology*. Cr. 2. Structure and function of the immune system in animals. I give half the lectures.

Education and Training Offered by CFSPH and IICAB

<http://www.cfsph.iastate.edu/education-and-training.php>

Emerging and Exotic Diseases of Animals for Veterinary Students

<http://www.aavmc.org/Education/Emerging-and-Exotic-Diseases-of-Animals-and-USDA-Initial-Accreditation-Training.aspx>

The Emerging and Exotic Diseases of Animals (EEDA) web-based is currently used at all United States veterinary colleges. The course fulfills the Initial Accreditation Training requirement of the USDA National Veterinary Accreditation Program. The course has been used since 2002 to raise awareness of foreign, emerging, and exotic animal diseases and to prepare veterinarians to recognize and appropriately respond to unusual animal diseases. Veterinary students access the course through a portal on the Association of American Veterinary Medical Colleges website www.aavmc.org. The CFSPH developed the course content with other academic institutions and manages and continuously updates the course. The USDA APHIS provides support for veterinary colleges to offer the course and distribute a companion textbook. The course is available for continuing education and has been translated into Spanish as well. Email eeda@iastate.edu for more information.

Emerging and Exotic Diseases of Animals for Continuing Education

www.EEDACourse.org

The EEDA web-based course, used at all U.S. veterinary colleges is also available for continuing education credit for graduate veterinarians (up to 18 RACE approved, non-interactive, continuing education hours).

Enfermedades Transfronterizas de los Animales

<http://www.cfsph.iastate.edu/Educacion-Instruccion/enfermedades-transfronterizas-de-los-animales.php?lang=es>

Spanish language version of the EEDA course above. Used by more than 2200 individuals in Central America 2013 to 2016.

National Veterinary Accreditation Program (NVAP)

www.cfsph.iastate.edu/NVAP/

The CFSPH, working with USDA-APHIS has developed APHIS-approved supplemental training materials for the National Veterinary Accreditation Program (NVAP). Veterinarians seeking to renew their USDA accreditation can choose from three different supplemental training formats. There are approximately 65,000 accredited veterinarians in the U.S who are required to have APHIS-approved supplemental training.

Zoonoses: Protecting People and Their Pets

www.cfsph.iastate.edu/Zoonoses-Course/

Available for veterinary and human healthcare professionals and students to refresh and gain knowledge of key zoonotic diseases. The course includes lessons, case studies, a discussion board, and online resources to assist in conveying zoonotic disease prevention measures to clients.

National Animal Health Emergency Response Corps (NAHERC) Training

naherc.sws.iastate.edu/

Free training available to anyone who is interested in animal emergency response.

IICAB Veterinary Biologics Training Program

<http://www.cfsph.iastate.edu/IICAB/meetings/may2017.php>

The Veterinary Biologics Training Program has been offered every year since 1996. Almost 2100 individuals, including more than 600 attendees from 89 countries, have attended the program. The course gives participants an overview of the scientific principles of vaccines and vaccination and of the USDA regulatory process for assuring the purity, safety, potency and efficacy of veterinary biologics.

Veterinary Immunology & Principles of Vaccination

www.cfsph.iastate.edu/Immunology/full-course.php

This is a web based course presented by Dr. Jim Roth. This course (containing over 17 hours of lectures) is the same as that formerly delivered at Block 1 of the IICAB Veterinary Biologics Training Program.

Introduction to Veterinary Immunology & Principles of Vaccination

www.cfsph.iastate.edu/Immunology/short-course.php

This web based course provides a high-level overview of the above-listed longer course. Dr. Jim Roth in 4.5 hours of lectures introduces how the immune system works, how vaccines prevent disease and why vaccines sometimes fail to protect from disease and occasionally cause adverse reactions.

Introduction to Animal Emergency Management

www.cfsph.iastate.edu/Education-Training/introduction-to-animal-emergency-management.php

A 10 part course to provide USDA Animal Care employees with foundational information and skills to support USDA APHIS Animal Care's emergency planning and response roles.

Currently serving as major or co-major professor for 2 graduate students:

<i>Student</i>	<i>Degree Sought</i>	<i>Major</i>	<i>Co-Major Professor</i>
Jennifer English	MS	Vet Micro	E. Vaghn
Nicholas Van Engen	PhD	Vet Micro	H. Coetzee

Graduate degrees awarded (for which J. Roth served as major or co-major professor):

<i>Student</i>	<i>Degree Received</i>	<i>Major</i>	<i>Semester of Graduation</i>
Dagmar E. Frank, DVM	MS	Vet Micro	Spring 1985
Peter C. Canning, BS	PhD	Imbio	Fall 1985
Deborah S. A. Webb, MS	PhD	Imbio	Fall 1986
Xiaoling Zhu, BS	MS	Imbio	Spring 1987
Marla S. Steinbeck, MS	PhD	Imbio	Fall 1987
Robert Briggs, DVM	MS	Vet Micro	Spring 1988
Belinda Lawler Goff, MS	PhD	Imbio	Spring 1988
Marcus Kehrli, DVM	PhD	Imbio	Spring 1989
Gail Kuhlman, BS	PhD	An Sci	Fall 1989
Gayle B. Brown, DVM	MS	Imbio	Fall 1989
Michael Roof, BS	PhD	Vet Micro/Imbio	Fall 1991
Bradley Bosworth, DVM	PhD	Imbio	Fall 1991
Nancy Coe, DVM	PhD	Vet Micro	Summer 1992
Karen Hehnke, MS	PhD	Imbio	Fall 1993
Lori Hutchinson, BS	MS	Imbio	Fall 1993
Chih Chuan Lee, BS	MS	MCDB	Spring 1994
Kevan P. Flaming, DVM, MS	PhD	Imbio	Spring 1995
Anna Rovid, DVM	PhD	Imbio	Summer 1995
Eun Kyung Lee, BS	PhD	Imbio	Summer 1996
Mark Quade, DVM	MS	Imbio	Summer 1996
Jeffrey Issacson, DVM	PhD	Imbio	Fall 1996
W. Ray Waters, DVM	PhD	Imbio	Fall 1996
Lisa Pelan, BS	MS	Imbio	Spring 1998

<i>Student</i>	<i>Degree Received</i>	<i>Major</i>	<i>Semester of Graduation</i>
Mark Quade, DVM	PhD	Imbio	Summer 1998
Gayle B. Brown, DVM	PhD	Imbio	Spring 1999
Janice Endsley, MS	PhD	Imbio	Fall 2000
Mohammad Heidari, BS	PhD	Imbio	Spring 2000
Anton Roach, DVM	MS	Imbio	Spring 2000
Cameron Schmidt, DVM	MS	Vet Micro	Spring 2002
Carolyn Hammer, DVM	PhD	An Sci	Spring 2003
Ruth Osmundson	PhD	Imbio	Summer 2003
Matt Sandbulte	PhD	Imbio	Fall 2003
Jasbir Singh, DVM	MS	Vet Micro	Spring 2004
Dusan Palic, DVM	PhD	Imbio	Spring 2005
Crystal Loving	PhD	Imbio	Spring 2006
Wasin Chareerntanakul	PhD	Imbio	Summer 2006
Nyssa Ann Levy	MS	Imbio	Spring 2008
Alaina Ingebritson	MS	Vet Micro	Spring 2009
Matt Kappes	MS	Imbio	Spring 2009
Amanda Scherer	MS	Imbio	Summer 2009
Danelle Bickett-Weddle	PhD	Vet Micro	Summer 2009
Wesley Johnson	MS	Micro	Fall 2009
Phil Gauger	PhD	Vet Micro	Spring 2012
Robert Schaut	PhD	Imbio	Fall 2012
Randall Levings	PhD	Vet Micro	Fall 2012
Brian Vander Ley	PhD	Vet Micro	Fall 2012
Rachel Tell	PhD	Imbio	Summer 2012
Josh Ellingson	MS	Vet Micro	Spring 2013
Zahra Olson	MS	Imbio	Fall 2014
Unity Jeffrey	PhD	Imbio	Summer 2016

University Councils and Committees:

Immunobiology Interdepartmental Program Supervisory Committee (1984-1987) *Chairman*

Faculty Council (1981-1984) *Executive Committee member*

Biotechnology Council (1984-1987)

Provost Search Committee (1987)

Center for Advanced Agriculture (1987)

Molecular Biology Building Committee (1987-1989)

Animal Facilities Long-Range Planning Committee (1987) *Chair*

President's Task Force on Budget Priorities (1991)

Faculty Senate Committee on University Planning (1993-1997)

University Strategic Planning Committee (1994)

ISU Research Foundation, Board of Directors (1994-1998), Vice President (1995-1997)

University Strategic Planning Committee (1999)

Council on International Programs (2001)

Provost's Promotion and Tenure Committee (2001)

University Distinguished Professor Selection Committee (2000-2004) (2008-2011) *Chair* 2004

Executive VP and Provost Search Committee (2006)
Pandemic Influenza Planning Committee (2006-2009)
Presidential Initiative Subcommittee: Membership in the National Academies (2012-2015)
University Faculty Review Board (2013-2015)

College of Veterinary Medicine Committees

Chair, CVM Promotion and Tenure Committee (2012-2018)

Peer-Reviewed Print Publications:

1. Roth, J.A., L.G. Lomax, N. Altszuler, H. Hampshire, M.L. Kaeberle, M. Shelton, D.D. Draper, and A.E. Ledet. 1980. Thymic abnormalities and growth hormone deficiency in dogs. *Am J Vet Res*, 41:1256-1262.
2. Roth, J.A., and M.L. Kaeberle. 1980. Chemiluminescence by *Listeria monocytogenes*. *J Bacteriol*, 144:752-757.
3. Roth, J.A., M.L. Kaeberle, and R.W. Griffith. 1981. Effects of bovine viral diarrhea virus infection on bovine polymorphonuclear leukocyte function. *Am J Vet Res*, 42:244-250.
4. Roth, J.A., and M.L. Kaeberle. 1981. Evaluation of bovine polymorphonuclear leukocyte function. *Vet Immunol Immunopathol*, 2:157-174.
5. Roth, J.A., and M.L. Kaeberle. 1981. Effects of *in vivo* dexamethasone administration on *in vitro* bovine polymorphonuclear leukocyte function. *Infect Immun*, 33:434-441.
6. Roth, J.A., and M.L. Kaeberle. 1981. Isolation of neutrophils and eosinophils from the peripheral blood of cattle and comparison of their functional activities. *J Immunol Methods*, 45:153-164.
7. Roth, J.A., M.L. Kaeberle, and W.H. Hsu. 1982. Effects of ACTH administration on bovine polymorphonuclear leukocyte function and lymphocyte blastogenesis. *Am J Vet Res*, 43:412-416.
8. Roth, J.A., and M.L. Kaeberle. 1982. Effects of glucocorticoids on the bovine immune system. *J Am Vet Med Assoc*, 180:894-901.
9. Roth, J.A., M.L. Kaeberle, and W.H. Hsu. 1982. Effect of estradiol and progesterone on lymphocyte and neutrophil function in steers. *Infect Immun*, 35:997-1002.
10. Grier, R.L., D.F. Merkley, J.A. Roth, and M.A. Mouw. 1982. Clinical trial of benzaldehyde in pets with solid tumors: preliminary study. *Am J Vet Res*, 43:2270-2271.
11. Löfstedt, J., J.A. Roth, R.F. Ross, and W.C. Wagner. 1983. Depression of polymorphonuclear leukocyte function associated with experimentally induced *Escherichia coli* mastitis in sows. *Am J Vet Res*, 44:1224-1228.
12. Roth, J.A., M.L. Kaeberle, L.H. Appell, and R.F. Nachreiner. 1983. Association of increased estradiol and progesterone blood values with altered bovine polymorphonuclear leukocyte function. *Am J Vet Res*, 44:247-253.

13. Roth, J.A., and M.L. Kaerberle. 1983. Suppression of neutrophil and lymphocyte function induced by a vaccinal strain of bovine viral diarrhoea virus with and without the concurrent administration of ACTH. *Am J Vet Res*, 44:2366-2372.
14. Dopson, L.C., S.M. Reed, J.A. Roth, L.E. Perryman, and P. Hitchcock. 1983. Immunosuppression associated with lymphosarcoma in two horses. *J Am Vet Med Assoc*, 182:1239-1241.
15. Hagemoser, W.A., J.A. Roth, J. Lofstedt, and J.A. Fagerland. 1983. Granulocytopenia in a Holstein heifer. *J Am Vet Med Assoc*, 183:1093-1094.
16. Roth, J.A., M.L. Kaerberle, R.L. Grier, J.G. Hopper, H.E. Spiegel, and H.A. McAllister. 1984. Improvement in clinical condition and thymus morphology associated with growth hormone treatment of immunodeficient dwarf dogs. *Am J Vet Res*, 45:1151-1155.
17. Ryu, H., M.L. Kaerberle, J.A. Roth, and R.W. Griffith. 1984. Effect of type A *Pasteurella multocida* fractions on bovine polymorphonuclear leukocyte functions. *Infect Immun* 43:66-71.
18. Coignoul, F.L., T.A. Bertram, J.A. Roth, and N.F. Cheville. 1984. Functional and ultrastructural evaluation of neutrophils from foals and lactating and nonlactating mares. *Am J Vet Res*, 45:898-902.
19. Roth, J.A., and M.L. Kaerberle. 1984. Effect of levamisole on lymphocyte blastogenesis and neutrophil function in dexamethasone-treated cattle. *Am J Vet Res*, 45:1781-1784.
20. Grier, R.L., D.F. Merkley, and J.A. Roth. 1984. Pilot study on the treatment with thioproline of 24 small animals with tumors. *Am J Vet Res*, 45:2162-2166.
21. Roth, J.A., M.L. Kaerberle, and R.D. Hubbard. 1984. Attempts to use thiabendazole to improve the immune response in dexamethasone-treated or stressed cattle. *Immunopharmacology*, 8:121-128.
22. Kaerberle, M.L., and J.A. Roth. 1984. Effects of thiabendazole on dexamethasone-induced suppression of lymphocyte and neutrophil function in cattle. *Immunopharmacology*, 8:129-136.
23. Ellenberger, M.A., M.L. Kaerberle, and J.A. Roth. 1984. Effect of *Rhodococcus equi* on equine polymorphonuclear leukocyte function. *Vet Immunol Immunopathol*, 7:315-324.
24. Ellenberger, M.A., M.L. Kaerberle, and J.A. Roth. 1984. Equine cell-mediated immune response to *Rhodococcus (Corynebacterium) equi*. *Am J Vet Res*, 45:2424-2427.
25. Ellenberger, M.A., M.L. Kaerberle, and J.A. Roth. 1984. Equine humoral immune response to *Rhodococcus (Corynebacterium) equi*. *Am J Vet Res*, 45:2428-2430.
26. Roth, J.A., and M.L. Kaerberle. 1985. Enhancement of lymphocyte blastogenesis and neutrophil function by avridine in dexamethasone-treated and nontreated cattle. *Am J Vet Res*, 46:53-57.
27. Lukacs, K., J.A. Roth, and M.L. Kaerberle. 1985. Activation of neutrophils by antigen-induced lymphokine with emphasis on antibody-independent cytotoxicity. *J Leukoc Biol*, 38:557-572.

28. Canning, P.C., J.A. Roth, L.B. Tabatabai, and B.L. Deyoe. 1985. Isolation of components of *Brucella abortus* responsible for inhibition of function in bovine neutrophils. *J Infect Dis*, 152:913-921.
29. Roth, J.A., and M.L. Kaeberle. 1985. In vivo effect of ascorbic acid on neutrophil function in healthy and dexamethasone-treated cattle. *Am J Vet Res*, 46:2434-2436.
30. Monroe, W.E., and J.A. Roth. 1986. The thymus as part of the endocrine system. *Compend Contin Educ*, 8:24-32.
31. Hauser, M.A., M.D. Koob, and J.A. Roth. 1986. Variation of neutrophil function with age in calves. *Am J Vet Res*, 47:152-153.
32. Hubbard, R.D., M.L. Kaeberle, J.A. Roth, and Y.-W. Chiang. 1986. *Haemophilus somnus*-induced interference with bovine neutrophil functions. *Vet Microbiol*, 12:77-85.
33. O'Brien, S.E., J.A. Roth, and B.L. Hill. 1986. Response of pups to modified live canine parvovirus component in a combination vaccine. *J Am Vet Med Assoc*, 188:699-705.
34. Steinbeck, M.J., J.A. Roth, and M.L. Kaeberle. 1986. Activation of bovine neutrophils by bovine recombinant gamma interferon. *Cell Immunol*, 98:137-144.
35. Roth, J.A., S.R. Bolin, and D.E. Frank. 1986. Lymphocyte blastogenesis and neutrophil function in cattle persistently infected with bovine viral diarrhea virus. *Am J Vet Res*, 47:1139-1141.
36. Bertram, T.A., P.C. Canning, and J.A. Roth. 1986. Preferential inhibition of primary granule release from bovine neutrophils by an extract from *Brucella abortus*. *Infect Immun*, 52:285-292.
37. Chiang, Y.-W., M.L. Kaeberle, and J.A. Roth. 1986. Identification of suppressive components in *Haemophilus somnus* fractions which inhibit bovine polymorphonuclear leukocyte function. *Infect Immun*, 52:792-797.
38. Canning, P.C., J.A. Roth, and B.L. Deyoe. 1986. Release of 5'-guanosine monophosphate and adenine by *Brucella abortus* and their role in the intracellular survival of the bacteria. *J Infect Dis*, 154:464-470.
39. Frank, D.E., and J.A. Roth. 1986. Factors secreted by untreated and hydrocortisone-treated monocytes that modulate neutrophil function. *J Leukoc Biol*, 40:693-707.
40. Webb, D.S.A., and J.A. Roth. 1987. Relationship of glucocorticoid suppression of arachidonic acid metabolism to alteration of neutrophil function. *J Leukoc Biol*, 41:156-164.
41. Monroe, W.E., J.A. Roth, R.L. Grier, L.H. Arp, and P.H. Naylor. 1987. Effects of growth hormone on the adult canine thymus. *Thymus*, 9:173-187.
42. Goff, B.L., J.A. Roth, L.H. Arp, and G.S. Incefy. 1987. Growth hormone treatment stimulates thymulin production in aged dogs. *Clin Exp Immunol*, 68:580-587.

43. Bolin, S.R., J.A. Roth, E.K. Uhlenhopp, and J.F. Pohlenz. 1987. Immunologic and virologic findings from a case of chronic bovine viral diarrhea. *J Am Vet Med Assoc*, 190:1015-1017.
44. Morrison, W.B., D.E. Frank, J.A. Roth, and N.J. Wilsman. 1987. Assessment of neutrophil function in two dogs with primary ciliary dyskinesia. *J Am Vet Med Assoc*, 191:425-430.
45. Canning, P.C., B.K. Deyoe, and J.A. Roth. 1988. Opsonin-dependent stimulation of bovine neutrophil oxidative metabolism by *Brucella abortus*. *Am J Vet Res*, 49:160-163.
46. Roth, J.A., B.L. Goff, and W.E. Monroe. 1988. Immunodeficient dwarfism in dogs: a model for neuroimmunomodulation. *Int J Neurosci*, 38:443-454.
47. Roth, J.A. 1988. How cattle defend themselves against *Pasteurella haemolytica* pneumonia. *Vet Med*, 83:1067-1072.
48. Kuhlman, G.B., J.A. Roth, P.J. Flakoll, M.J. Vande Haar, and S. Nissen. 1988. Effects of dietary leucine, alpha ketoisocaproate and isovalerate on antibody production and lymphocyte blastogenesis in growing lambs. *J Nutr*, 118:1564-1569.
49. Kehrli, M.E., B.J. Nonnecke, and J.A. Roth. 1989. Alterations in bovine neutrophil function during the periparturient period. *Am J Vet Res*, 50:207-214.
50. Kehrli, M.E., B.J. Nonnecke, and J.A. Roth. 1989. Alterations in bovine lymphocyte function during the periparturient period. *Am J Vet Res*, 50:215-220.
51. Kehrli, M.E., B.J. Nonnecke, R.L. Wood, and J.A. Roth. 1989. In vivo effects of a thymosin alpha 1-containing colostral whey product on neutrophils and lymphocytes from lactating cows without and with experimentally induced *Staphylococcus aureus* mastitis. *Vet Immunol Immunopathol*, 20:149-163.
52. Steinbeck, M.J., and J.A. Roth. 1989. Neutrophil activation by recombinant cytokines. *Rev Infect Dis*, 11:549-568.
53. Roth, J.A., and D.E. Frank. 1989. Recombinant bovine interferon gamma as an immunomodulator in dexamethasone-treated and non-treated cattle. *J Interferon Res*, 9:143-151.
54. Roth, J.A., J.A. Jarvinen, D.E. Frank, and J.E. Fox. 1989. Alteration of neutrophil function associated with coccidiosis in cattle: influence of decoquinatone and dexamethasone. *Am J Vet Res*, 50:1250-1253.
55. Steinbeck, M.J., S.A. Webb, and J.A. Roth. 1989. Role for arachidonic acid metabolism and protein synthesis in recombinant bovine gamma interferon induced activation of bovine neutrophils. *J Leukoc Biol*, 46:450-460.
56. Canning, P.C., and J.A. Roth. 1989. Effects of in vitro and in vivo administration of recombinant bovine interferon gamma on bovine neutrophil response to *Brucella abortus*. *Vet Immunol Immunopathol*, 20:119-133.

57. Morrison, W.B., B.L. Goff, B. Stewart-Brown, G.S. Incefy, L. H. Arp, and J. A. Roth. 1990. Orally administered clonidine as a secretagogue of growth hormone and as a thymotropic agent in dogs of various ages. *Am J Vet Res*, 51:65-70.
58. Roth, J.A., A.F. Abruzzini, and D.E. Frank. 1990. Influence of recombinant human interleukin-2 administration on lymphocyte and neutrophil function in clinically normal and dexamethasone-treated cattle. *Am J Vet Res*, 51:546-549.
59. Chiang, Y.-W., J.A. Roth, and J.J. Andrews. 1990. Influence of recombinant bovine interferon gamma and dexamethasone on pneumonia attributable to *Haemophilus somnus* in calves. *Am J Vet Res*, 51:759-762.
60. Hoiem-Dalen, P.S., R.F. Rosenbusch, and J.A. Roth. 1990. Comparative characterization of the leukocytic and hemolytic activity of *Moraxella bovis*. *Am J Vet Res*, 51:191-196.
61. Brown, G.B., S.R. Bolin, D.E. Frank, and J.A. Roth. 1991. Defective function of leukocytes from cattle persistently infected with bovine viral diarrhea virus, and the influence of recombinant cytokines. *Am J Vet Res*, 52:381-387.
62. Brown, G.B., and J.A. Roth. 1991. Comparison of the response of bovine and human neutrophils to various stimuli. *Vet Immunol Immunopathol*, 28:201-218.
63. Chiang, Y.-W., H. Murata, and J.A. Roth. 1991. Activation of bovine neutrophils by recombinant bovine tumor necrosis factor-alpha. *Vet Immunol Immunopathol*, 29:329-338.
64. Kuhlman, G., J.A. Roth, and S. Nissen. 1991. Effects of α -ketoisocaproate on adrenocorticotropin-induced suppression of lymphocyte function in sheep. *Am J Vet Res*, 52(3):388-392.
65. Goff, B.L., K.P. Flaming, D.E. Frank, E.R. Clough, and J.A. Roth. 1991. Recombinant porcine somatotropin: an immunotoxicology study. *J Anim Sci*, 69:4523-4537.
66. Roth, J.A. 1991. The principles of vaccination: the factors behind vaccine efficacy and failure. *Vet Med*, 406-413.
67. Roof, M.B., T.T. Kramer, and J.A. Roth. 1992. A comparison of virulent and avirulent strains of *Salmonella choleraesuis* and their ability to invade Vero cell monolayers. *Vet Microbiol*, 30:355-368.
68. Roof, M.B., J.A. Roth, and T.T. Kramer. 1992. Porcine salmonellosis: Characterization, immunity and potential vaccines. *Compend Cont Ed Prac Vets*, 14:411-424.
69. Carpenter, S., L.D. Miller, S. Alexandersen, C.A. Whetstone, M.J. Van Der Maaten, B. Viuff, Y. Wannemuehler, J.M. Miller, and J.A. Roth. 1992. Characterization of early pathogenic effects after experimental infection of calves with bovine immunodeficiency-like virus. *J Virol*, 66:1074-1083.
70. Coe, N.E., D.E. Frank, R.L. Wood, and J.A. Roth. 1992. Alteration of neutrophil function in BCG-treated and nontreated swine after exposure to *Salmonella typhimurium*. *Vet Immunol Immunopathol*, 33:37-50.

71. Roof, M.B., T.T. Kramer, J.A. Roth, and F.C. Minion. 1992. Characterization of a *Salmonella choleraesuis* isolate following repeated neutrophil exposure. *Am J Vet Res*, 53:1328-1332.
72. Roof, M.B., T.T. Kramer, J.P. Kunesh, and J.A. Roth. 1992. In vivo isolation of *Salmonella choleraesuis* from porcine neutrophils. *Am J Vet Res*, 53:1333-1336.
73. Lee, C.C., and J.A. Roth. 1992. Differences in neutrophil function in young and mature cattle and their response to interferon gamma. *Comp Haematol Int*, 2:140-147.
74. Flaming, K., M. Van Der Maaten, C. Whetstone, S. Carpenter, D. Frank, and J. Roth. 1993. Effect of bovine immunodeficiency-like virus on immune function in experimentally-infected cattle. *Vet Immunol Immunopathol*, 36:91-105.
75. Alexandersen, S., S. Carpenter, J. Christensen, T. Storgaard, B. Viuff, Y. Wannemuehler, J. Belousov, and J.A. Roth. 1993. Identification of alternatively spliced mRNAs encoding potential new regulatory proteins in cattle infected with bovine leukemia virus. *J Virol*, 67:39-52.
76. Coe, N.E., D.E. Frank, and J.A. Roth. 1993. Effect of recombinant human cytokines on porcine neutrophil function. *Vet Immunol Immunopathol*, 37:39-47.
77. Roth, J.A. 1993. Characterization of protective antigens and the protective immune response. *Vet Microbiol*, 37:193-199.
78. Roth, J.A. 1993. Evaluation of the influence of potential toxins on neutrophil function. *Toxicol Pathol*, 21:141-146.
79. Wannemuehler, Y., J. Isaacson, M. Wannemuehler, C. Wood, J.A. Roth, and S. Carpenter. 1993. In vitro detection of bovine immunodeficiency-like virus using monoclonal antibodies generated to a recombinant *gag* fusion protein. *J Virol Methods*, 44:117-128.
80. Carpenter, S., S.A. Nadin-Davis, Y. Wannemuehler, and J.A. Roth. 1993. Identification of transactivation-response sequences in the long terminal repeat of bovine immunodeficiency-like virus. *J Virol*, 67:4399-4403.
81. DeBey, M.C., J.A. Roth, and R.F. Ross. 1993. Enhancement of the increase in intracellular calcium concentration in stimulated neutrophils by *Mycoplasma hyopneumoniae*. *Vet Res Comm*, 17:249-257.
82. Kuhlman, G., J.A. Roth, and S. Nissen. 1994. Modulation of T-cell subsets in sheep by dietary leucine and alpha ketoisocaproate. *J Nutritional Immunol*, 2:7-15.
83. Flaming, K.P., B.L. Goff, D.E. Frank, and J.A. Roth. 1994. Pigs are relatively resistant to dexamethasone-induced immunosuppression. *Comp Haematol Int*, 4:218-225.
84. Coe-Clough, N.E. and J.A. Roth. 1995. Methods for assessing cell-mediated immunity in infectious disease resistance and in the development of vaccines. *J Am Vet Med Assoc*, 206:1208-1216.

85. Rovid, A.H., S.L. Carpenter, and J.A. Roth. 1995. Monocyte function in cattle experimentally infected with bovine immunodeficiency-like virus. *Vet Immunol Immunopathol*, 45:31-43.
86. Issacson, J.A., J.A. Roth, C. Wood, and S.L. Carpenter. 1995. Loss of Gag-specific antibody reactivity in cattle experimentally infected with bovine immunodeficiency-like virus. *Viral Immunol*, 8:27-36.
87. Roth, J.A. 1995. Cytokines as immunomodulators in cattle. *Bull Soc French-Jpn Vet Sci*, 6:123-127.
88. Rovid, A.H., S. Carpenter, L.D. Miller, K.P. Flaming, M.J. Long, M.J. Van Der Maaten, D.E. Frank, and J.A. Roth. 1996. An atypical T cell lymphosarcoma in a calf with bovine immunodeficiency-like virus infection. *Vet Path*, 33:457-459.
89. De Bey, B.M., J.A. Roth, K.A. Brogden, R.C. Cutlip, M.G. Stevens, T. Jones, R.E. Briggs, and J.P. Kluge. 1996. In vitro lymphocyte proliferative responses and γ -interferon production as measures of cell-mediated immunity of cattle exposed to *Pasteurella haemolytica*. *Can J Vet Res*, 60:263-270.
90. Flaming, K.P., D.E. Frank, S. Carpenter, and J.A. Roth. 1997. Longitudinal studies of immune function in cattle experimentally infected with bovine immunodeficiency-like virus and/or bovine leukemia virus. *Vet Immunol Immunopathol*, 56:27-38.
91. Fox, B.C., M.B. Roof, D.P. Carter, L.D. Kesl, and J.A. Roth. 1997. Safety and efficacy of an avirulent live *Salmonella choleraesuis* vaccine for protection of calves against *Salmonella dublin*. *Am J Vet Res*, 58:265-271.
92. Rovid, A.H. and J.A. Roth. 1997. Enhancement of monocyte migration and phagocytosis by the bovine immunodeficiency-like virus Gag proteins. *J Acquir Immuno Defic Syndr and Hum Retrovirol*, 14:18-25.
93. Quade, M.J. and J.A. Roth. 1997. A rapid, direct assay to measure degranulation of bovine neutrophil primary granules. *Vet Immunol Immunopathol*, 58:239-248.
94. Roth, J.A., and Vaughn, M.B. 1998. Evaluation of viral shedding and immune response following vaccination with modified live BHV1 vaccine. *Bov Prac*, 32:1-2.
95. Isaacson, J.A., K.P. Flaming, and J.A. Roth. 1998. Effects of long-term infection with bovine immunodeficiency virus and/or bovine leukemia virus on antibody and lymphocyte proliferative responses in cattle. *Vet Immunol Immunopathol*, 64:249-266.
96. Isaacson, J.A., K.P. Flaming, and J.A. Roth. 1998. Increased MHC class II and CD25 expression on lymphocytes in the absence of persistent lymphocytosis in cattle experimentally infected with bovine leukemia virus. *Vet Immunol Immunopathol*, 64:235-248.
97. Quade, M.J. and J.A. Roth. 1999. Dual-color flow cytometric analysis of phenotype, activation marker expression, and proliferation of mitogen-stimulated bovine lymphocyte subsets. *Vet Immunol Immunopathol*, 67:33-45.

98. Quade, M.J. and J.A. Roth. 1999. Antigen specific in vitro activation of T lymphocyte subsets of cattle immunized with a modified-live bovine herpesvirus-1 vaccine. *Viral Immunol*, 12:9-21.
99. Thanawongnuwech, R., G.B. Brown, P.G. Halbur, J.A. Roth, R.L. Royer and B.J. Thacker. 2000. Pathogenesis of porcine reproductive and respiratory syndrome virus- induced increase in susceptibility to *Streptococcus suis* infection. *Vet Pathol*, 37:143-152.
100. Halbur, P.G., R.T. Thanawongnuwech, G.B. Brown, J. Kinyon, J.A. Roth, E. Thacker, and B. Thacker. 2000. Efficacy of antimicrobial treatments and vaccination regimens for control of porcine reproductive and respiratory syndrome virus and *Streptococcus suis* coinfection of nursery pigs. *J Clin Micro*, 38:1156-1160.
101. Carpenter, S., E.M. Vaughn, J. Yang, P. Baccam, J.A. Roth, and Y. Wannemuehler. 2000. Antigenic and genetic stability of bovine immunodeficiency virus during long term persistence in experimentally infected cattle. *J Gen Virol*, 81:1463-1472.
102. Fajt, V.R., M.D. Apley, J.A. Roth, D.E. Frank, T.L. Skogerboe, V.K. Karle, and A.D. Dayton. 2000. Effects of danofloxacin and tilmicosin on circulating neutrophils in beef heifers, *J Vet Pharmacol Ther*, 23:181-187.
103. Roth, J.A., and D.P. Carter. 2000. Comparison of bovine herpes virus 1 vaccines for rapid induction of immunity. *Vet Ther*, 1:220-228.
104. Schmitt, C.S., P.G. Halbur, J.A. Roth, J.M. Kinyon, C. Kasorndorkbua and B. Thacker. 2001. Influence of ampicillin, ceftiofur, an attenuated live PRRSV vaccine, and reduced dose *Streptococcus suis* exposure on disease associated with PRRSV and *S. suis* co-infection. *Vet Microbiol*, 78:29-37.
105. Roth, J.A., D.E. Frank, P. Weighner, and M. Weighner. 2001. Enhancement of neutrophil function by ultrafiltered bovine whey. *J Dairy Sci*, 84:824-829.
106. Lee, E.K., R. Platt, S. Kang, J.A. Roth, and G.J. Phillips. 2001. Chromosomal integration and expression of the *Escherichia coli* K88 gene cluster in *Salmonella choleraesuis* strain 54 (SC54). *Vet Microbiol*, 83:177-183.
107. Sandbulte, M.R., and J.A. Roth. 2002. T-cell populations responsive to bovine respiratory syncytial virus in seronegative calves. *Vet Immunol Immunopathol*, 84:111-123.
108. Endsley, J.J, M. Quade, B. and Terhaar, J.A. Roth. 2002. BHV-1 - Specific CD4⁺, CD8⁺, and $\gamma\delta$ T cells in calves vaccinated with one dose of a modified live BHV-1 vaccine. *Viral Immunol*, 15(2):385-393.
109. Roth, J.A., B. Hibbard, D.E. Frank, L. Kesl, and E.J. Robb. 2002. The effects of formulation on the immunostimulatory activity of Dihydroheptaprenol. *Vet Ther*, 3(3):347-353.
110. Roth, J.A., A. Boghossian, C. Brown, P. Cowen, R. Davis, J. Galyon, D. Hird, J. Kasper, S. Little, and E. Uhlenhopp. 2002. Exotic and emerging diseases of animals. *J Vet Med Edu*, 29(4):210-211.

111. Brown, C., D. Hird, J.A. Roth, G. Wagner, C. Jost, and M. Memon. 2002. International opportunities for veterinary medicine students. *J Vet Med Edu*, 29(4):220-224.
112. Endsley, J.J., M.J. Quade, B. Terhaar, and J.A. Roth. 2002. Bovine viral diarrhea virus type 1- and type 2-specific bovine T lymphocyte - subset responses following modified-live virus vaccination. *Vet Ther*, 3(4):364-372.
113. Ridpath, J.F., J.D. Neill, J. Endsley, and J.A. Roth. 2003. Effect of passive immunity on the development of a protective immune response against bovine viral diarrhea virus in calves. *Am J Vet Res*, 64(1):65-69.
114. Fajt, V.R., M.D. Apley, J.A. Roth, D.E. Frank, K.A. Brogden, T.L. Skogerboe, V.K. Shostrom, and Y.-L. Chin. 2003. The effects of danofloxacin and tilmicosin on neutrophil function and lung consolidation in beef heifer calves with induced *Pasteurella (Mannheimia) haemolytica* pneumonia. *J Vet Pharmacol Ther*, 26:173-179.
115. Spickler, A.R., and J.A. Roth. 2003. Adjuvants in Veterinary Vaccines: Modes of Action and Side Effects. *J Vet Internal Med*, 17:273-281.
116. Endsley, J.J., J.A. Roth, J. Ridpath, and J. Neill. 2003. Maternal antibody blocks humoral but not T cell responses to BVDV. *Biologicals*, 31:123-125.
117. Sandbulte, M.R., and J.A. Roth. 2003. Priming of multiple T-cell subsets by modified live and inactivated bovine respiratory syncytial virus vaccines. *Vet Immunol Immunopathol*, 95:123-133.
118. Pallares, F.J., P.G. Halbur, C.S. Schmitt, J.A. Roth, T. Opriessnig, P.J. Thomas, J.M. Kinyon, D. Murphy, D.E. Frank, and L.J. Hoffman. 2003. Comparison of experimental models for *Streptococcus suis* infection of conventional pigs. *Can J Vet Res*, 67:225-228.
119. Roth, J.A., and A.R. Spickler. 2003. A survey of vaccines produced for OIE list A diseases in OIE member countries. *Dev Biol*, 114:5-25.
120. Pallares, F.J., P.G. Halbur, C.S. Schmitt, J.A. Roth, R.B. Evans, and J.M. Kinyon. 2004. Evaluation of a ceftiofur-washed whole cell *Streptococcus suis* bacterin in pigs. *Can J Vet Res*, 68:236-240.
121. Kampen, A.H., T. Tollersrud, S. Larsen, J.A. Roth, D.E. Frank, and A. Lund. 2004. Repeatability and stability of flow cytometric and classical measurement of phagocytosis and respiratory burst in bovine neutrophils. *Vet Immunol Immunopathol*, 97:105-114.
122. Endsley, J.J., J.F. Ridpath, J.D. Neill, M.R. Sandbulte, and J.A. Roth. 2004. Induction of T lymphocytes specific for BVD virus in calves with maternal antibody. *Viral Immunol*, 17(1):13-23.
123. Sandbulte, M.R., R. Platt, and J.A. Roth. 2004. T cell from a high proportion of apparently naïve cattle can be activated by modified vaccinia virus Ankara (MVA). *Viral Immunol*, 17(1):39-49.
124. Sandbulte, M.R., and J.A. Roth. 2004. Methods for analysis of cell-mediated immunity in domestic animal species. *J Am Vet Med Assoc*, 225:522-530.

125. Palić, D., C.B. Andreasen, D.E. Frank, B. Menzel, and J.A. Roth. 2005. Gradient separation and cytochemical characterisation of neutrophils from kidney of fathead minnow (*Pimephales promelas* Rafinesque, 1820). *Fish Shellfish Immunol*, 18(3):263-267.
126. Palić, D., C.B. Andreasen, B. Menzel, and J.A. Roth. 2005. A rapid, direct assay to measure degranulation of primary granules in neutrophils from kidney of fathead minnow (*Pimephales promelas* Rafinesque, 1820). *Fish Shellfish Immunol*, 19(3):217-227.
127. Chareerntantanakul, W., R. Platt, W. Johnson, M. Roof, E. Vaughn, and J. A. Roth. 2006. Immune responses and protection by vaccine and various vaccine adjuvant candidates to virulent porcine reproductive and respiratory syndrome virus. *Vet Immunol Immunopathol*, 109:99-115.
128. Palic, D., C.B. Andreasen, D.M. Herolt, B.W. Menzel, and J.A. Roth. 2006. Immunomodulatory Effects of β -glucan on neutrophil function in fathead minnows (*Pimephales promelas* Rafinesque, 1820). *Dev Comp Immunol*, 30:817-830.
129. Palic, D., D.M. Herolt, C.B. Andreasen, B.W. Menzel, and J.A. Roth. 2006. Anesthetic efficacy of tricaine methanesulphonate, metomidate and eugenol: Effects on plasma cortisol concentration and neutrophil function in fathead minnow (*Pimephales promelas* Rafinesque, 1820). *Aquaculture*, 254(1-4):675-685.
130. Platt, R., W. Burdett, and J.A. Roth. 2006. Induction of antigen specific T cell subset activation to bovine respiratory disease viruses by a modified-live virus vaccine. *Am J Vet Res*, 67(7):1179-1184.
131. Weingartl, H.M., Y. Berhane, J.L. Caswell, S. Loosmore, J.C. Audonnet, J.A. Roth, and M. Czub. 2006. Recombinant Nipah virus vaccines protect pigs against challenge. *J Virol*, 80(16):7929-7938.
132. Chareerntantanakul, W., R. Platt, and J.A. Roth. 2006. Effects of porcine reproductive and respiratory syndrome virus-infected antigen presenting cells on T cell activation and antiviral cytokine production. *Viral Immunol*, 19(4):646-661.
133. Niang, M., M. Diallo, O. Cisse, M. Kone, M. Doucoure, J.A. Roth, V. Balcer-Rodrigues, and L. Dedieu. 2006. Pulmonary and serum antibody responses elicited in zebu cattle experimentally infected with *Mycoplasma Mycoides* subsp. *mycoides* SC by contact exposure. *Vet Res*, 37:733-744.
134. Platt, R., J.A. Roth, R.L. Royer, and C.O. Thoen. 2006. Monitoring responses by use of 5-color flow cytometry in subsets of peripheral T cells obtained from cattle inoculated with a killed *Mycobacterium avium* subspecies *paratuberculosis* vaccine. *Am J Vet Res*, 67(12):2050-2058.
135. Paul, M.A., L.E. Carmichael, H. Childers, S. Cotter, A. Davidson, R. Ford, K.F. Hurley, J.A. Roth, R.D. Schultz, E. Thacker, and L. Welborn. 2006. 2006 AAHA canine vaccine guidelines. *J Am Anim Hosp Assoc*, 42:80-89.
136. Palic, D., C.B. Andreasen, J. Ostojić, R. M. Tell, and J.A. Roth. 2007. Zebrafish (*Danio rerio*) whole kidney assays to measure neutrophil extracellular trap release and degranulation of primary granules. *J Immunol Meth*, 319: 87-97.

137. Palic, D., J. Ostojić, C.B. Andreasen, and J.A. Roth. 2007. Fish cast NETs: Neutrophil extracellular traps are released from fish neutrophils. *Develop Comp Immunol*, 31:805-816.
138. Charerntantanakul, and J.A. Roth. 2007. Biology of porcine T cells. *Anim Health Res Rev*, 7:81-96.
139. Grey, G.C., D.W. Trampel, and J.A. Roth. 2007. Pandemic influenza planning: Shouldn't swine and poultry workers be included? *Vaccine*, 25:4376-4381.
140. Bickett-Weddle, D., M.L. Aquilino, and J.A. Roth. 2008. Cooperative University of Iowa/Iowa State University MPH program. *J Vet Med Ed*, 35:173-176.
141. Platt, R., C. Coutu, T. Meinert, and J.A. Roth. 2008. Humoral and T Cell-mediated immune responses to bivalent killed bovine viral diarrhea virus vaccine in beef cattle. *Vet Immunol Immunopathol*, 122:8–15.
142. Spickler, A.R., D.W. Trampel, and J.A. Roth. 2008. The onset of virus shedding and clinical signs in chickens infected with high pathogenicity and low pathogenicity avian influenza viruses. *Avian Path*, 37:555-577.
143. Tamin, A., B.H. Harcourt, M.K. Lo, J.A. Roth, M.C. Wolf, B. Lee, H. Weingartl, J.C. Audonnet, W.J. Bellini, and P.A. Rota. 2009. Development of a neutralization assay for Nipah virus using pseudotype particles. *J Virol Methods*, 160:1-6.
144. Platt, R., P.W. Widell, L.D. Kesl, and J.A. Roth. 2009. Comparison of humoral and cellular immune responses to a pentavalent modified live virus vaccine in three age groups of calves with maternal antibodies, before and after BVDV type 2 challenge. *Vaccine*, 27:4508-4519.
145. Trampel, D.W., J.T. Zack, T. Clouse, V. Rao, D. Bickett-Weddle, G.B. Brown, H.S. Hurd, G.I. Garris, and J.A. Roth. 2009. Federal and state transport plan for movement of eggs and egg products from non-infected commercial table egg premises in a high pathogenicity avian influenza control area – a model for protecting animal health, human health, and business continuity during a foreign animal disease outbreak. *JAVMA*, 235:1412-1419.
146. Platt, R., B.A. Sponseller, Y.W. Chiang, and J.A. Roth. 2010. Cell-mediated immunity evaluation in foals infected with virulent equine herpesvirus-1 by multi-parameter flow cytometry. *Vet Immunol Immunopathol*, 135: 275-281.
147. Roth J.A., and A.R. Spickler. 2010. Duration of immunity to companion animal vaccines. *Anim Health Res Rev*, 11(2):165-190.
148. Platt, R., C.O. Thoen, R.J. Stalberger, Y.W. Chiang, and J.A. Roth . 2010. Evaluation of the cell-mediated immune response to reduced doses of *Mycobacterium avium* ssp *paratuberculosis* vaccine in cattle. *Vet Immunol Immunopathol*, 136:122-126.
149. Ingebritson, A.L., J.A. Roth, and P.J. Hauer. 2010. *Erysipelothrix rhusiopathiae*: Association of Spa-type with serotype and role in protective immunity. *Vaccine*, 28: 2490-2496. 2010.

150. Ackermann, M., R. Derscheid, and J.A. Roth. 2010. Innate immunology of bovine respiratory disease. *Vet Clin North Am Food Anim Pract*, 26: 215-228.
151. Plattner, B.L., Y.W. Chiang, J.A. Roth, R. Platt, E. Huffman, J. Zylstra, and J.M. Hostetter. 2011. Direct inoculation of *Mycobacterium avium subspecies paratuberculosis* into ileocecal Peyer's patches results in colonization of the intestine in a calf model. *Vet Pathol*, 48:584-592.
152. Roth, J.A. 2011. Veterinary Vaccines and Their Importance to Animal Health and Public Health. *Proceedia in Vaccinology*, 5:127-136.
153. Kulpa-Eddy, J., G. Srinivas, M. Halder, R. Hill, K. Brown, J. Roth, H. Draayer, J. Galvin, I. Claassen, G. Gifford, R. Woodland, V. Doelling, B. Jones, W. S. Stokes. 2011. Non-Animal Replacement Methods for Veterinary Vaccine Potency Testing: State of the Science and Future Directions. *Proceedia in Vaccinology*, 5:60-83
154. Platt, R., A.L. Vincent, P.C. Gauger, C.L. Loving, E.L. Zanella, K. M. Lager, M.E. Kehrli, Jr., K. Kimura, J. A. Roth. 2011. Comparison of Humoral and Cellular Immune Responses to Inactivated Swine Influenza Virus Vaccine in Weaned Pigs. *Vet Immunol Immunopathol*. 142:252– 257
155. Burdett, W.W., M.W. Bolton, L. Kesl, S.T. Nordstrom, D.G. Renter, J.A. Roth, R. Saltzman, W. Xue. 2011. Evaluation of the Onset of Protective Immunity from Administration of a Modified-live, Non-adjuvanted Vaccine prior to Intranasal Challenge with Bovine Herpesvirus-1. *The Bovine Practitioner* 45:32-39.
156. Gay, C.G., D.P. Knowles, J.A. Roth, M.E. Kehrli, G.H. Palmer, M. Pappaioanou. 2011. Enhancing the Role and Participation of Veterinarians in Biomedical Research. *Proceedings of the First Global Conference on Evolving Veterinary Education for a Safer World*. 113-122.
157. Gauger P.C, A.L. Vincent, C.L. Loving, K.M. Lager, B.H. Janke, M.E. Kehrli Jr, J.A. Roth. 2011. Enhanced pneumonia and disease in pigs vaccinated with an inactivated human-like (δ -cluster) H1N2 vaccine and challenged with pandemic 2009 H1N1 influenza virus. *Vaccine*. 29:2712-2719.
158. Kappes, M.A., M.R. Sandbulte, R. Platt, C. Wang, K.M. Lager, J.N. Henningson, A. Lorusso, A.L. Vincent, C.L. Loving, J.A. Roth, M.E. Kehrli. 2012. Vaccination with NS1-truncated H3N2 swine influenza virus primes T cells and confers cross-protection against an H1N1 heterosubtypic challenge in pigs. *Vaccine*. 30:280-288.
159. Berns, K.I., A. Casadevall, M.L. Cohen, S.A. Ehrlich, L.W. Enquist, J.P. Fitch, D.R. Franz, C.M. Fraser-Liggett, C.M. Grant, M.J. Imperiale, J. Kanabrocki, P.S. Keim, S.M. Lemon, S.B. Levy, J.R. Lumpkin, J.F. Miller, R. Murch, M.E. Nance, M.T. Osterholm, D.A. Relman, J.A. Roth, A.K. Vidaver. 2012. NSABB Recommendations on Communication of Experimental Adaptation of Avian Influenza A/H5N1. *Science*. 212:660-661.
160. Berns, K.I., A. Casadevall, M.L. Cohen, S.A. Ehrlich, L.W. Enquist, J.P. Fitch, D.R. Franz, C.M. Fraser-Liggett, C.M. Grant, M.J. Imperiale, J. Kanabrocki, P.S. Keim, S.M. Lemon, S.B. Levy, J.R. Lumpkin, J.F. Miller, R. Murch, M.E. Nance, M.T. Osterholm, D.A. Relman, J.A. Roth, A.K. Vidaver. 2012. Adaptations of Avian Flu Virus are a Cause for Concern. *Nature*. 482:153-154.

161. Gauger P.C, A.L. Vincent, C.L. Loving, J. N. Henningson, K.M. Lager, B.H. Janke, M.E. Kehrli Jr, J.A. Roth. 2012. Kinetics of lung lesion development and pro-inflammatory cytokine response in pigs with vaccine-associated enhanced respiratory disease induced by challenge with pandemic (2009) A/H1N1 influenza virus. *Vet Pathology*. 49:900-912.
162. Wongyanin P., S. Buranapraditkul, D. Yoo, R. Thanawonguwech, J.A. Roth, S. Suradhat. 2012. The role of porcine reproductive and respiratory syndrome virus (PRRSV) nucleocapsid protein in induction of IL-10 and regulatory T lymphocytes (Treg). *J General Virol*. 93:1236-1246.
163. Platt, R., T. Ng, S. Glover, M. Roof, K. Kimura, J.A. Roth. 2013. Canine peripheral blood lymphocyte phenotyping by 7-color multi-parameter flow cytometry. *Analytical and Quantitative Cytology and Histology*. 35(4):197-204.
164. Levings, R.L., J.A. Roth, 2013. Immunity to Bovine Herpesvirus 1: I. Viral Lifecycle and Innate Immunity, *Animal Health Research Reviews*.14: 88-102.
165. Levings, R.L., J.A. Roth, 2013. Immunity to Bovine Herpesvirus 1: II. Adaptive Immunity and Vaccinology, *Animal Health Research Reviews*. 14: 103-123.
166. Gauger, P.C., A.L. Vincent, C.L. Loving, K.M. Lager, B.H. Janke, M.E. Kehrli, J.A. Roth, 2013. Vaccine associated enhanced respiratory disease does not interfere with the adaptive immune response following challenge with pandemic A/H1N1 2009. *Viral Immunology*. 26:1-8
167. Levings, R.L., I.R. Stoll, J.V. Warg, P.A. Patterson, L.A. Hobbs, M.L. Kaeberle, J.A. Roth, 2014. Generation by self re-fusion of bovine3 x murine2 heterohybridomas secreting virus-neutralizing bovine monoclonal antibodies to bovine herpesvirus 1 glycoproteins gB, gC, and gD. *Vet Immunol Immunopathol*. 159:58-73
168. Kimura, K., J.P. Goff, P. Canning, C. Wang, J.A Roth. 2014. Effect of PEG rbG-CSF injection on neutrophil number and function in periparturient dairy cows. *J. Dairy Sci*. 97:1-10.
169. Sandbulte, M.R., R. Platt, J. A. Roth, J.N. Henningson, K.A. Gibson, D.S. Rajao, C. L. Loving, A. Vincent. 2014. Divergent immune responses and disease outcomes in piglets immunized with inactivated and attenuated H3N2 swine influenza vaccines in the presence of maternally-derived antibodies. *Virology* 464-465:45-54.
170. Gauger, P.C., C.L. Loving, S. Kuhrana, A. Lorusso, D.R. Perez, M.E. Kehrli, J.A. Roth, H. Golding, A.L. Vincent. 2014. Live Attenuated Influenza A Virus Vaccine Protects Against A(H1N1)pdm09 Heterologous Challenge Without Vaccine Associated Enhanced Respiratory Disease. *Virology* 471-473:93-104
171. Chattha, K.S., J.A. Roth, L.J. Saif. Strategies for design and application of enteric viral vaccines. *Annu. Rev. Anim. Biosci*. 2015. 3:6.1-6.21
172. Sandbulte, M.R., A Rovid-Spickler, P. Zaabel, J.A. Roth. 2015. Optimal Use of Vaccines for Control of Influenza A Virus in Swine. *Vaccines*, 3, 22-73; doi:10.3390/vaccines3010022.

173. Levings, R.L., J.K. Collins, P.A. Patterson, J.A. Roth. 2015. Virus, strain, and epitope specificities of neutralizing bovine monoclonal antibodies to bovine herpesvirus 1 glycoproteins gB, gC, and gD, with sequence and molecular model analysis. *Vet Immunol Immunopathol.* 164:179-193.
174. Roth, J.A., C.K. Tuggle. 2015. Livestock Models in Translational Medicine. *ILAR Journal* 56:1-6.
175. Sandbulte, M., P. Gauger, P. Kitikoon, H. Chen, D. Perez, J. Roth, A. Vincent. 2016. Neuraminidase inhibiting antibody responses in pigs differ between influenza A virus N2 lineages and by vaccine type. *Vaccine* 34(33): 3773-3779..
176. Rajão, D.S., M.R. Sandbulte, P.C. Gauger, P. Kitikoon, R.Platt, J.A. Roth, D.R. Perez, C.L. Loving, A. Vincent. 2016. Heterologous challenge in the presence of maternally-derived antibodies results in vaccine-associated enhanced respiratory disease in weaned piglets. *Virology.* 491:79-88.
177. Van Engen, N.K., R. Platt, J.A. Roth, M.L. Stock, T. Engelken, RC Vann, L.W. Wulf, W.D. Busby, C. Wang, E.M. Kalkwarf, J.F. Coetzee. 2016. Impact of oral meloxicam and long-distance transport on cell-mediated and humoral immune responses in feedlot steers receiving modified live BVDV booster vaccination on arrival. *Veterinary Immunology and Immunopathology* 175, 42-45.
178. Pickering, B.S., J.M. Hardham, G. Smith, E.T. Weingartl, P.J. Dominowski, D.L. Foss, D. Mwangi, C.C. Broder, J.A. Roth, H.M. Weingartl. 2016. Protection against henipaviruses in swine requires both, cell-mediated and humoral immune response. *Vaccine* 34(40): 4777-4786.

Contributions to Monographs:

1. Roth, J.A. 1984. Immunosuppression and immunomodulation in bovine respiratory disease. *In:* R.W. Loan (ed.): Bovine Respiratory Disease. College Station, Texas, Texas A & M University Press, pp 143-192.
2. Roth, J.A. 1985. Cortisol as a mediator of stress-associated immunosuppression in cattle. *In:* G.P. Moberg (ed.): Animal Stress. Bethesda, Maryland, American Physiological Society, pp 225-243.
3. Roth, J.A. 1985. The role of immunosuppression in bovine respiratory disease. *In:* S. Johnson (ed.): A Symposium on Bovine Respiratory Immunology. Lenexa, Kansas, Veterinary Medicine Publishing Co., Inc., pp 6-10.
4. Roth, J.A. 1987. Possible association of thymus dysfunction with fading syndromes in puppies and kittens. *In:* D. Lawler, and E.D. Colby (eds.): Veterinary Clinics of North America--Small Animal Practice. pp 603-616.
5. Roth, J.A. 1987. Recent advances in basic bovine immunology. *In:* A Seminar in Bovine Immunology. Lawrenceville, New Jersey, Veterinary Learning Systems Co., Inc., pp 5-10.
6. Roth, J.A. 1987. Susceptibility to bovine respiratory disease. *In:* Bovine Respiratory Disease: Proceedings of a Seminar. Lawrenceville, New Jersey, Veterinary Learning Systems Co., Inc., pp 4-9.

7. Roth, J.A. 1987. Development of immunomodulators for use in domestic animals. *In: The World Biotechnology Report, Vol. 1, Part 4 Agricultural Economics and Technology*. London, Online Publications, pp 63-68.
8. Roth, J.A. 1988. Enhancement of nonspecific resistance to bacterial infection by biologic response modifiers. *In: J.A. Roth (ed.): Virulence Mechanisms of Bacterial Pathogens*. Washington, DC, American Society for Microbiology, pp 329-342.
9. Roth, J.A., and B. Lawler Goff. 1989. Immunology and production diseases. *In: F.A. Kalfelz (ed.): Proceedings, Seventh International Conference on Production Disease in Farm Animals*. Cornell University Press, pp 121-130.
10. Straw, B., J.A. Roth, and L.J. Saif. 1989. Basics of immunology. *In: Pork Industry Handbook*. Purdue University Cooperative Extension Service, West Lafayette, Indiana, PIH-122, pp 1-4.
11. Kehrli, M.E., and J.A. Roth. 1990. Chemically-induced immunomodulation in domestic food animals. *In: F. Blecha, and B. Charley (eds): Immunomodulation in Domestic Food Animals*. Academic Press, San Diego, California, pp 103-119.
12. Roth, J.A., and K.P. Flaming. 1990. Model systems to study immunomodulation in domestic food animals. *In: F. Blecha, and B. Charley (eds.): Immunomodulation in Domestic Food Animals*. Academic Press, San Diego, California, pp 21-41.
13. Nissen, S., G. Kuhlman, and J.A. Roth. 1990. Modulation of ovine lymphocyte function by leucine and leucine metabolites. *In: G. Lube (ed.): Therapeutic Application of Amino and Keto Acids*. Escom Science Publishers, The Netherlands, pp 817-820.
14. Goff, B.L., and J.A. Roth. 1991. Influence of somatotropin on disease resistance in food producing animals. *In: P. Van der Wal (ed.): Biotechnology for Control of Growth and Product Quality in Meat Production: Implications and Acceptability*. pp 143-151.
15. Roth, J.A. 1992. Immune system. *In: A.D. Leman, B. Straw, R.D. Glock, W.L. Mengeling, R.H.C. Penny, and E. Scholl (eds.): Diseases of Swine*, 7th edition. Iowa State University Press, Ames, IA, pp 21-39.
16. Roth, J.A. 1994. Neutrophils and killer cells. *In: B. Goddeeris and W.I. Morrison (eds.): Cell-Mediated Immunity in Ruminants*. CRC Press, pp 127-142.
17. Roth, J.A. 1994. The immunologic basis for effective vaccines. *The Bovine Proceedings*, 26:3-9.
18. Roth, J.A. 1995. Immunosuppression and immunodeficiency. *In: R.W. Kirk and Bonnagura (ed.): Kirk's Current Veterinary Therapy XII, Small Animal Practice*. W.B. Saunders Co, pp 560-563.
19. Roth, J.A. 1998. Non-specific immunity in cattle. *In: P.P. Pastoret, H. Bazin, A. Govaerts, P.J. Griebel (eds.): Handbook of Vertebrate Immunology*. Academic Press, pp 466-469.
20. Roth, J.A. and L.J. Perino. 1998. Immunology and prevention of infection in feedlot cattle. *Vet Clin North Am Food Anim Pract*, G. Stokka (ed), 14: 233-256.

21. Roth, J.A. 1999. Mechanistic bases for adverse vaccine reactions and vaccine failures. *In: Advances in Veterinary Science and Comparative Medicine*. 41:681-700.
22. Roth, J.A. 1999. Immune System. *In: B. Straw, S. D'Allaire, W. Mengeling, D. Taylor, (eds): Diseases of Swine, 8th edition. Iowa State University Press, pp 799-820.*
23. Andreasen, C.B. and J.A. Roth. 2000. Neutrophil functional abnormalities. *In: B.F. Feldman, J.G. Zinkl, N.C. Jain, (eds): Schalm's Veterinary Hematology, 5th edition. Lippincott, Williams and Wilkins, Philadelphia, PA, pp 356-365.*
24. Roth, J.A and L.M. Henderson. 2001. New technology for improved vaccine safety and efficacy. *Vet Clin North Am Food Anim Pract, J.A. Roth (ed), 17:585-597.*
25. Roth, J.A. 2004. Foot and mouth disease "Vaccination to live" possibilities and constraints. *In: A. Schudel, M. Lombard, (eds): Control of Infectious Diseases of Animals by Vaccination. Dev Biol (Basel), Karger, 119.*
26. Roth, J.A. 2004. The role of OIE in Harmonization. *In: A. Schudel, M. Lombard, (eds): Control of Infectious Diseases of Animals by Vaccination. Dev Biol (Basel), Karger, 119.*
27. Roth, J.A. and E.L. Thacker. 2006. Immune System. *In: B.E. Straw, J.J. Zimmerman, S. D=Allaire, D.J. Taylor, (eds): Diseases of Swine, 9th edition. Blackwell Publishing, Ames, IA, pp 15–36.*
28. Galyon, J., A. Rovid Spickler, and J.A. Roth. 2006. Descriptions of Recent Incursions of Exotic Animal Diseases. *In: A. Rovid Spickler and J.A. Roth, (eds): Emerging and Exotic Diseases of Animals, 3rd edition. Iowa State University, Ames, IA. 297 pages. ISBN 0-9745525-4-2.*
29. Roth, J.A. and P.P. Pastoret. 2007. Veterinary Vaccines, *In: C.G. Gay and T. Richie, (eds): Advances in Immunology and Vaccine Discovery. Report of the United States-European Commission Workshop. pp. 16-18.*
30. Roth, J.A. 2008. Calf Pre-Weaning Immunity and Impact on Vaccine Schedules. *In: D.E. Anderson, and D.M. Rings, (eds): Current Veterinary Therapy: Food Animal Practice. W.B. Saunders Co. ISBN 1-4160359-1-5.*
31. Rovid Spickler, A. and J.A. Roth. 2010. Zoonoses, *In: The Merck Veterinary Manual, 10th Edition. . pp. 2747-2819.*
32. Rovid Spickler, A., J. Galyon, and J.A. Roth. 2010. Descriptions of Recent Incursions of Exotic Animal Diseases. *In: A. Rovid Spickler and J.A. Roth, (eds): Emerging and Exotic Diseases of Animals, 4th edition. Center for Food Security and Public Health, Iowa State University, Ames, IA. 383 pages. ISBN 0-978-0-9745525-8-3*
33. Roth, J. A., J. Galyon, and A. Stumbaugh. 2010. Causes and consequences of emerging and exotic diseases of animals: Role of the veterinarian. *In: A. Rovid Spickler, J.A. Roth, J. Galyon, and J. Lofstedt (eds): Emerging and Exotic Diseases of Animals, 4th edition. Center for Food Security and Public Health, Iowa State University, Ames, IA. 383 pages. ISBN 0-978-0-9745525-8-3*

34. Daniels, P., M. Narasiman, C.G. Gay, J.A. Roth, H.M. Weingartl. 2012. Hendra and Nipah Virus Diseases. *In: OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, 7th Edition*, 1225-1238.
35. Roth, J.A., M.V. Lenardon, J. Galyon. 2015. How Web-Based Training Can Enhance Veterinary Education. *Proceedings of the OIE Global Conference on Veterinary Education and the Role of the Veterinary Statutory Body*. pp. 135-137.
36. Roth, J.A and M. R. Sandbulte. 2016. The Role of Veterinary Vaccines in Livestock Production, Animal Health and Public Health. *In Veterinary Vaccines For Livestock*, S. Metwally, A. ElIdrissi, and G. Viljoen (Eds), UN Food and Agriculture Organization. Accepted for Publication.
37. Roth, J.A. and J. Galyon. 2016. Vaccines as Tools Against Infectious Diseases in Veterinary Medicine. *In Controversies in Vaccine Safety: A Critical Review*. C.A. Shaw, C. Dwoskin, L. Lujan, and Tomljenovic. Elsevier. Accepted for Publication.
38. Roth, J.A., J. Galyon, and G.B. Brown. 2016. Causes and Consequences of Transboundary and Emerging Diseases of Animals: Role of the Veterinarian. *In Transboundary and Emerging Diseases of Animals*. A. Rovid Spickler, J.A. Roth, G. Brown, and J. Galyon, (eds.) Center for Food Security and Public Health, Iowa State University, 344 pages.

Textbooks:

Coe-Clough, N.E. and J.A. Roth. 1998. Mosby's Biomedical Science Series: Understanding Immunology. Mosby-Year Book, St. Louis, MO, 225 pages.

Monographs/Journal Issues Edited:

1. Virulence Mechanisms of Bacterial Pathogens, J.A. Roth, (ed.) Washington, DC, American Society for Microbiology, 1988, 390 pages.
2. Characterization and Quantitation of Immunogens in Veterinary Biologics T.O. Bunn and J.A. Roth (eds.) *Veterinary Microbiology*, 1993, 37(3-4), 424 pages.
3. Virulence Mechanisms of Bacterial Pathogens, 2nd edition, J.A. Roth, C. Bolin, K. Brogden, F.C. Minion and M. Wannemuehler, (eds.) Washington, D.C., American Society for Microbiology, 1995, 366 pages.
4. Virulence Mechanisms of Bacterial Pathogens, 3rd edition, K. Brogden, J.A. Roth, T. Stanton, C. Bolin, F.C. Minion and M. Wannemuehler, (eds.) Washington, D.C., American Society for Microbiology, 2000, 294 pages.
5. Veterinary Clinics of North America: Food Animal Practice, Special Issue on Immunology, J.A. Roth, (ed.) 2001, 17:463-646.
6. Vaccines for OIE List A and Emerging Animal Diseases. F. Brown and J.A. Roth, (eds.) *Biologicals*, 2003, 114, 306 pages.

7. Emerging and Exotic Diseases of Animals. A. Rovid Spickler and J.A. Roth, (eds.) Center for Food Security and Public Health, Iowa State University, 2003, 182 pages.
8. Emerging and Exotic Diseases of Animals, 2nd edition, A. Rovid Spickler and J.A. Roth, (eds.) Center for Food Security and Public Health, Iowa State University, 2004, 192 pages. ISBN 0-9745525-3-4
9. Emerging and Exotic Diseases of Animals, 3rd edition, A. Rovid Spickler and J.A. Roth, (eds.) Center for Food Security and Public Health, Iowa State University, 2006, 297 pages. ISBN 0-9745525-4-2
10. Handbook for Zoonotic Diseases of Companion Animals. G. Dvorak, A. Rovid Spickler, and J.A. Roth, (eds) Center for Food Security and Public Health, Iowa State University, 2008. 359 pages. ISBN 0-9745525-6-9
11. Emerging and Exotic Diseases of Animals. 4th edition, A. Rovid Spickler, J.A. Roth, J. Galyon and J. Lofstedt, (eds.) Center for Food Security and Public Health, Iowa State University, 2010, 383 pages. ISBN 0-978-0-9745525-8-3
12. Enfermedades Emergentes y Exoticas de los Animales. Primera Edicion, A. Rovid Spickler, J.A. Roth, J. Galyon, J. Lofstedt, and M.V. Lenardon, (eds.) Center for Food Security and Public Health, Iowa State University, 2010, 336 pages. ISBN 978-0-9846270-0-4
13. Vaccines and Diagnostics for Transboundary Animal Diseases. J. A. Roth, J. A. Richt, I. Morozov, (eds) Developments in Biologicals. 2013. Vol 135, 226 pages.
14. Zoonoses: Protecting People and Their Pets. G. Dvorak, J.A. Roth, G. C. Gray, B. Kaplan, (eds) Center for Food Security and Public Health, Iowa State University, 2013, 239 pages, ISBN: 978-0-9846270-3-5
15. Livestock Models in Translational Science. ILAR Journal. National Research Council of the National Academies. J.A. Roth and C. Tuggle (Eds) 56:1, 2015 146 pages.
16. Transboundary and Emerging Diseases of Animals. A. Rovid Spickler, J.A. Roth, G. Brown, and J. Galyon, (eds.) Center for Food Security and Public Health, Iowa State University, 2016, 344 pages. ISBN 0-978-0-9846270-5-9

Peer Reviewed Web Based Publications

Foreign Animal Disease Preparedness & Response Plan (FAD PRéP); National Animal Health Emergency Management System (NAHEMS) Guidelines: Vaccination for Contagious Diseases.

2010. J. A. Roth, A. Stumbaugh, A. Rovid-Spickler, and D. Bickett-Weddle, 63 pages.

https://fadprep.lmi.org/NAHEMS/NAHEMS%20-%20202010%20and%20beyond/FAD-PRéP_NAHEMS_Guidelines_Vaccination_05Nov2010.pdf

Foreign Animal Disease Preparedness & Response Plan (FAD PRéP); National Animal Health

Emergency Management System (NAHEMS) Guidelines: Vaccination for Contagious Diseases; **Appendix A: Foot-And-Mouth Disease**. 2011. A. Rovid Spickler and J.A. Roth, 93 pages. https://fadprep.lmi.org/NAHEMS/NAHEMS%20-%202010%20and%20beyond/FAD-PreP_NAHEMS_AppA%20_VaxFMD_FINAL_20April2011v2.pdf

or: <http://www.cfsph.iastate.edu/pdf/fad-prep-nahems-appendix-a-vaccination-for-foot-and-mouth-disease>

Foreign Animal Disease Preparedness & Response Plan (FAD PReP); National Animal Health Emergency Management System (NAHEMS) Guidelines: Vaccination for Contagious Diseases; **Appendix B: Vaccination For Classical Swine Fever**. 2012. P. K. Zaabel, A. Rovid Spickler and J.A. Roth, 68 pages. https://fadprep.lmi.org/NAHEMS/NAHEMS%20-%202010%20and%20beyond/FAD-PreP_NAHEMS_Guidelines_AppB_VaxCSF_FINAL_28Feb2012.pdf

Foreign Animal Disease Preparedness & Response Plan (FAD PReP); National Animal Health Emergency Management System (NAHEMS) Guidelines: Vaccination for Contagious Diseases; **Appendix C: Vaccination For High Pathogenicity Avian Influenza**. 2011. A. Rovid Spickler and J.A. Roth, 140 pages. https://fadprep.lmi.org/NAHEMS/NAHEMS%20-%202010%20and%20beyond/FAD-PreP_NAHEMS_Guidelines_AppC_VaxHPAI_FINAL_v1.pdf

FAD PReP Strategy Document, Classification of Phases and Types of a Foot-And-Mouth Disease Outbreak and Response. 2012. J. A. Roth. 16 pages. <http://www.cfsph.iastate.edu/pdf/phases-and-types-of-an-fmd-outbreak>

Inactivation of Foot-and-Mouth Disease Virus in Milk Products, 2012. A. Rovid Spickler and J.A. Roth, 94 pages. <http://www.cfsph.iastate.edu/pdf/inactivation-of-foot-and-mouth-disease-virus-in-milk-products>

FMD Vaccine Surge Capacity for Emergency Use in the United States, 2014. J.A. Roth and A. Rovid Spickler, 134 pages. <http://www.cfsph.iastate.edu/pdf/fmd-vaccine-surge-capacity-for-emergency-use-in-the-US>

2015

Foreign Animal Disease Preparedness & Response Plan (FAD PReP); National Animal Health Emergency Management System (NAHEMS) **Guidelines: Vaccination for Contagious Diseases; Appendix C: Vaccination For High Pathogenicity Avian Influenza**. 2015. A. Rovid Spickler and J.A. Roth, 195 pages. <http://www.cfsph.iastate.edu/pdf/fad-prep-nahems-appendix-c-vaccination-for-high-pathogenic-avian-influenza>

Foreign Animal Disease Preparedness & Response Plan (FAD PReP); National Animal Health Emergency Management System (NAHEMS) Guidelines: **Vaccination for Contagious Diseases; Appendix A: Foot-And-Mouth Disease**. 2015. A. Rovid Spickler and J.A. Roth, 135 pages. <http://www.cfsph.iastate.edu/pdf/fad-prep-nahems-appendix-a-vaccination-for-foot-and-mouth-disease>

Guidelines for classification of phases and types of a classical swine fever outbreak and response – DRAFT_March 2015. J. A. Roth, 11 pages. <http://www.cfsph.iastate.edu/pdf/phases-and-types-of-a-csf-outbreak>

Guidelines for Classification of Phases and Types of an ASF Outbreak and Response - Draft. March 2015. J.A. Roth, 7 pages. <http://www.cfsph.iastate.edu/pdf/phases-and-types-of-an-asf-outbreak>

Patents:

J.A. Roth, Y.-W. Chiang and P.C. Canning: "Vaccines for counteracting inhibition of neutrophil degranulation." Patent number 4,701,323 issued October 20, 1987.

CONTRACT AND GRANT SUPPORT: Dr. Roth has been Principal Investigator or Project Director on **\$37,874,775** in grant support since 1989: including \$6,581,085 from HHS; \$23,267,809 from USDA; \$1,301,329 from DHS; and \$4,972,912 from industry. (updated: 11-2016) (Complete list available upon request).

Dr. Roth has been Co-PI on **\$4,906,332**: including \$471,500 from HHS; \$3,182,212 from USDA; \$37,750 from DHS; and \$686,588 from industry. (updated: 11-2016)

Contracts and Grants Active in 2016 (contracts/grants that were current during any part of 2016) totaled **\$8,919,751** with indirect costs of **\$787,237**.

Grants and Contracts –Newly Awarded in CY2016

List PI, Co-PIs, Title, Funding Agency, Amount, Start Date, End Date

Roth J PI: Swine Influenza A Virus Surveillance System Project. USDA ARS, \$70,422.00, 3-1-16 to 12-31-16.

Roth J PI: Implementation of the Secure Pork Supply Plan (yr 2). NPB, \$190,000.00, 1-1-16 to 12-31-16.

Roth J PI: Alternatives to Antibiotics. USDA ARS, \$35,000.00. 3-1-16 to 6-30-16.

Roth J PI, CoPI G Dvorak, K Flaming: Development and Delivery of APHIS Supplemental Training for RACE CE Units. USDA APHIS, \$115,610. 9-1-16 to 8-31-17.

Mogan King J PI, **CoPI J Roth:** Developing Training and Exercises for APHIS Veterinary Services Emergency Preparedness and Response Training. USDA APHIS \$710,551. 9-1-16 to 8-31-17.

Roth J PI, CoPI G Brown, K Flaming: Emerging and Exotic Diseases of Animals (EEDA) Web Based Course to Colleges of Veterinary Medicine. USDA APHIS \$308,736. 9-18-16 to 9-17-17.

Roth J PI, CoPI J Mogan King, K Flaming: Highly Pathogenic Avian Influenza Preparedness: Outreach and Engagement to Industry and State Officials for Implementaion of Updated Biosecurity and Unified Secure Poultry Supply Plan. USDA APHIS \$ 484,002. 8-18-16 to 8-17-17.

Roth J PI, CoPI J Mogan-King, K Flaming: (NAHERC) Highly Pathogenic Avian Influenza Preparedness: Developing and Updating HPAI and FAD Prep Materials for Producers, Industry and State Responders and FAD Prep Support to NPIC. USDA APHIS \$624,200. 8-18-16 to 8-17-17.

Roth J PI, CoPI D Bickett-Weddle, G Dvorak, J Mogan-King, K Flaming, P Zaabel: Secure Food Supply Plans for Business Continuity: Milk and Pork. USDA APHIS \$306,800. 8-18-16 to 8-17-17.

Roth J PI, CoPI P Zaabel: Development of a Transboundary Swine Disease Information Resource. Swine Health Information Center (NPB). \$57,500. 8-15-16 to 8-14-17.

Bickett-Weddle D PI, **CoPI J Roth**: Secure Beef Supply (SBS) Plan for Business Continuity in a Foot and Mouth Disease Outbreak. USDA APHIS \$226,094. 9-30-16 to 9-29-17.

Roth J PI: Development of Attending Veterinarian Online Module to Qualify for RACE Continuing Education: Exhibitor Presentations and Videos for USDA-APHIS Animal Care. USDA APHIS \$52,800. 9-30-16 to 9-29-17.

Grants and Contracts – Awarded prior to 2016 and remaining active in 2016

List PI, Co-PIs, Title, Funding Agency, Amount, Start Date, End Date

Roth J PI: Swine Influenza A Virus Surveillance System Project. USDA ARS NADC, \$115,693. 3-1-15 to 2-28-16.

Roth J PI: Swine Influenza A Virus Surveillance System Project. USDA ARS NADC, \$100,185. 3-1-14 to 2-28-16.

Roth J PI: J Mogan-King, K Flaming. Updating and Maintaining the NAHEMS Guideliens and Managing the NAHERC Training Site. USDA APHIS. \$497,200. 6-9-15 to 6-8-17.

Roth J PI: D Bickett Weddle, G Dvorak, J Mogan King, K Flaming, P Zaabel. Secure Milk and Secure Pork Suply Projects for Business Continuity in a Foreign Animal Disease Outbreak (15-16). USDA APHIS, \$495,000. 6-9-15 to 6-8-17.

Roth J PI: J Mogan-King, K Flaming. Developing Resources for Highly Pathogenic Avian Influenza Outbreaks for Federal and State Authorities, Producers and Associated Industries. USDA APHIS, \$484,000. 6-22-15 to 6-21-17.

Roth J PI: L Anderson, P Zaabel. Development of a Transboundary Swine Disease Information Resource. Swine Health Information Center (SHIC) NPB, \$120,000. 8-15-15 to 8-14-16.

Roth J PI: G Brown, K Flaming. Delivery of the Emerging and Exotic Diseases of Animal Course for Initial Accreditation Training. USDA APHIS, \$297,235. 9-18-15 to 12-31-16.

Roth J PI: Proposal to Develop: Presentation for Role of the Attending Veterinarian as Defined by the

Animal Welfare Act; Presentation of General Knowledge and the Horse Protection Act; RACE Approval for Live Webinars. USDA APHIS AC, \$73,700. 9-26-15 to 9-25-17.

Roth J PI: K Flaming, G Dvorak. DHS Center of Excellence for Emerging and Zoonotic and Animal Diseases - Education and Outreach Component (Yr 6). K State DHS. \$113,429. 7-1-15 to 6-30-16

Roth J PI: National Implementation of the Secure Egg Supply (SES) Data Portal -- Phase II. ISURF, \$50,000. 9-1-15 to 5-31-16.

Roth J PI: G Dvorak. Development of a Web Module, PowerPoint Presentation and Printable Document Related to the Veterinary Feed Directive for the USDA APHIS National Veterinary Accreditation Program. USDA APHIS, \$69,300. 9-18-15 to 12-31-16.

Roth J PI: D Bickett Weddle. A Secure Beef Supply (SBS) Plan for Business Continuity in a Foot and Mouth Disease Outbreak. USDA APHIS, \$205,613. 9-30-15 to 9-29-16.

Roth J PI: J Mogan-King. Support for the APHIS Veterinary Services Emergency Preparedness and Response Training and Exercise Initiative. USDA APHIS, \$578,413. 9-30-15 to 9-29-16.

Roth J PI: Delivering, Improving and Maintaining APHIS Approved Supplemental Training Modules for the USDA-APHIS National Veterinary Accreditation Program. USDA APHIS, \$495,000. 11-19-15 to 11-18-17.

Mosier D PI: Co-PI **Roth J.** Curriculum Enhancement for Diseases that Threaten Food Security (ISU portion). USDA HEC, \$208,509. 9-1-12 to 8-31-16.

Roth J PI: Co-PI Andreasen C, Hostetter J, Flaming K, Dvorak G. DHS Center of Excellence for Zoonotic and Animal Disease Defense - Education and Outreach Component. DHS Kansas State, \$80,000. 7-1-14 to 6-30-16 (yr 5/6).

Roth J PI: Proposal to Develop Presentations on New Importation Rule; Develop Videos and Photos for Exhibitor Presentations; and Obtain Race Approval for Animal Care Webinars. USDA APHIS, \$97,867. 9-16-14 to 9-15-16.

Roth J PI: Support for the NASAAEP Best Practices Working Groups and the NASAAEP Website. USDA APHIS, \$72,000. 9-18-14 to 9-17-16.

Roth J. Development and Updating of NVAP Web Modules, Print Manuals and PowerPoints for the APHIS Aquaculture Program. USDA APHIS. \$60,500. 9-29-14 to 9-28-16.

Roth J PI: CoPI Dvorak D, Bickett-Weddle D, Flaming K. Delivery, Improving and Maintaining APHIS Approved Supplemental Training Modules for the USDA APHIS National Veterinary Accreditation Program. USDA APHIS, \$234,850. 9-29-14 to 9-28-16.

Roth J PI: Delivery of the Emerging and Exotic Diseases of Animals Course for Initial Accreditation and Delivery of the Enfermedades Transfronterizas de los Animales (ETA) Course to the Professional Veterinary Services and Veterinary Students in OIRSA Member Countries. USDA APHIS, \$309,120.

9-29-14 to 9-28-16.

Roth J PI: Updating and Maintaining the NAHEMS Guidelines, Communicating the Need for Vaccines for Transboundary Diseases, and Managing the NAHERC Training Site. USDA APHIS, \$432,850. 8-15-14 to 8-14-16.

Roth J PI: Secure Food Supply Projects for Business Continuity in a Foreign Animal Disease Outbreak. USDA APHIS, \$484,000. 8-22-14 to 8-21-16.

Roth J PI. A Regulatory Flexibility Workshop for Veterinary Vaccine Potency Specifications. USDA ARS, \$77,000. 8-1-14 to 7-31-16.

Zhang Q PI; Co-PI **Roth J.** Novel and Practical Approaches for Mitigation of Campylobacteria in Poultry. USDA NIFA, \$10,250. 7-15-15 to 7-14-16.

Roth J PI: OIE Focal Points. OIE, \$45,000. 6-30-15 to 7-15-16.