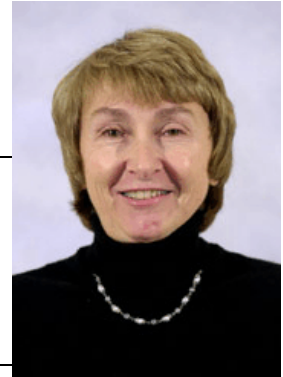


# Linda J. Saif



<i>Degrees</i>	<i>Institution</i>	<i>Year</i>
B.A.	The College of Wooster, Wooster, Ohio (Honors)	1969
M.S.	The Ohio State University - Microbiology	1971
Ph.D.	The Ohio State University - Microbiology	1976

## Professional Experience

1969-76	Graduate Research Fellow, Case Western Research Univ. Mol. Biol.: The Ohio State University, Dept. Microbiology,	Immunology Biochemistry
1976-79	Post-Doctoral Res. Assoc., OARDC, Veterinary Science Dept., Wooster, Ohio	Immunology, Virology
1979-90	Assistant/Associate Professor. OARDC/OSU, Food Animal Health Research Program, Wooster, Ohio	Immunology, Virology
1990-present	Distinguished University Professor, Professor, OARDC/OSU, Food Animal Health Research Program, Wooster, Ohio	Immunology, Virology

## Awards & Honors

- Member of Phi Kappa Phi and Phi Zeta, National Honor Societies
- Invited short term Distinguished Visiting Professor, Univ. of Guelph, Dept. of Veterinary Microbiology and Immunology, College of Veterinary Medicine, Guelph, Ontario, Canada, 1987
- Beecham Laboratories Award for Research Excellence, College of Veterinary Medicine, Ohio State U, 1989
- The American College of Veterinary Microbiologists, Honorary Diplomate, 1990
- Fulbright Research Scholarship, Institute of Virology, CICV-INTA, Buenos Aires, Argentina, 1992
- Distinguished Research Award, Top senior scientist, OARDC/OSU, 1992
- Invited lecturer, Utrecht Institute for Infection and Immunity (Master Class), The Netherlands, 1993
- Department Research Award, Food Animal Health Research Program, Ohio Agricultural Research and Development Center, The Ohio State University, 1995, 1997
- University Distinguished Scholar Award, The Ohio State University, 1995
- Elected Fellow--American Association for the Advancement of Science, 1995
- Distinguished Veterinary Immunologist Award, The American Association of Veterinary Immunologists, 1995
- University Distinguished Professor Award, The Ohio State University, 2002
- Honorary Doctorate, Ghent University, Ghent, Belgium, 2003
- Awarded Charles C. Capen Teaching Excellence Award for Graduate Education, College of Veterinary Medicine, The Ohio State University, 2003
- **Elected Member, US National Academy of Science, 2003**

## Publications (1977-present)

- 1 book (ed) and 42 book chapters
- 200+ Refereed journal articles; 31 Popular press and Proceedings; 308 Abstracts
- 1 Patent US#4341870

## Recent Publications related to Grant Objectives

1. Flynn, William T., and L. J. Saif. 1988. Serial propagation of porcine enteric calicivirus-like virus in primary porcine kidney cell cultures. *J. Clin. Microbiol.* 26(2):206-212.
2. Flynn, William T., L. J. Saif, and P. D. Moorhead. 1988. Pathogenesis of a porcine enteric calicivirus in gnotobiotic pigs. *Am. J. Vet. Res.* 49:819-828.
3. Kang, S.-Y., L. J. Saif, and K. L. Miller. 1989. Reactivity of VP4-specific monoclonal antibodies to a serotype 4 porcine rotavirus

- with distinct serotypes of human (symptomatic and asymptomatic) and animal rotaviruses. *J. Clin. Microbiol.* 27:2744-2750.
4. Parwani, A. V., L. J. Saif, and S.Y. Kang. 1990. Biochemical characterization of porcine enteric calicivirus: Analysis of structural and non\_structural viral proteins. *Arch. Virol.* 112:41-53.
  5. Jiang, B. M., L. J. Saif, and S.Y. Kang. 1990. Biochemical characterization of the structural and nonstructural polypeptides of a porcine group C rotavirus. *J. Virol.* 64:3171-3178.
  6. Parwani, A. V., W. T. Flynn, K. L. Gadfield, and L. J. Saif. 1991. Serial propagation of porcine enteric calicivirus in continuous cell line. Effect of medium supplementation with intestinal contents or enzymes. *Arch. Virol.* 120:115-122.
  7. Jiang, B. M., Y. Qian, H. Tsunemitsu, K. Y. Green, and L. J. Saif. 1991. Analysis of the gene encoding the outer capsid glycoprotein VP7 of group C rotaviruses by Northern and dot blot hybridization. *Virology* 18:433-436.
  8. Jiang, B., H. Tsunemitsu, J. Gentsch, R. Glass, K. Green, Y. Qian and L. J. Saif. 1992. Nucleotide sequence of gene 5 encoding the inner capsid protein (VP6) of bovine group C rotavirus: comparison with corresponding genes of group C, A and B rotaviruses. *Virology* 191:542-547.
  9. Van Cott, J., T. Brim, R. Simkins and L. J. Saif. 1993. Antibody-secreting cells to transmissible gastroenteritis virus and porcine respiratory coronavirus in gut- and bronchus-associated lymphoid tissues of neonatal pigs. *J. Immunol.* 150:3990-4000.
  10. Hussein, H., A. Parwani, B. Rosen, A. Lucchelli & L. Saif. 1993. Detection of rotavirus serotypes G1, G2, G3, and G11 in feces of diarrhetic calves by using PCR-derived cDNA probes. *J. Clin. Microbiol.* 31:2491-2496.
  11. Van Cott, J., T. Brim, J. Lunney & L. Saif. 1994. Contribution of antibody secreting cells induced in mucosal lymphoid tissues of pigs inoculated with respiratory or enteric strains of coronavirus to immunity against enteric coronavirus challenge. *J. Immunol.* 152:3980-3990.
  12. Hoshino, T., L. Saif, S. Kang, M. Sereno, W. Chen and A. Kapikian. 1995. Identification of group A rotavirus genes associated with virulence of a porcine rotavirus and host range restriction of a human rotavirus in the gnotobiotic piglet model. *Virol.* 209:274-280.
  13. Ward, L., B. Rosen, L. Yuan & L. Saif. 1996. Pathogenesis of an attenuated and virulent strain of group A human rotavirus in neonatal gnotobiotic pigs. *J. Gen. Virol.* 77:1431-1441.
  14. Saif, L., L. Ward, L. Yuan *et al* 1996. The gnotobiotic piglet as a model for studies of disease pathogenesis and immunity to human rotaviruses. *Arch. Virol.* 12:153-161.
  15. Yuan, L., L. Ward, B. Rosen, T. To, and L. Saif. 1996. Evaluation of systemic and intestinal antibody-secreting cell responses to human rotavirus in a gnotobiotic pig model of disease. *J. Virol.* 70:3075-3083.
  16. Ward, L., L. Yuan, B. Rosen, and L. Saif. 1996. Local and systemic T-cell immunity to human group A rotavirus in neonatal gnotobiotic pigs. *Clin. Diag. Lab. Immunol.* 3:342-350.
  17. Fernandez, F., D. Todhunter, A. Parwani, S. Crawford, M. Conner, K. Smith, M. Estes, and L. Saif. 1996. Isotype-specific antibody responses to rotavirus in cows inoculated with subunit vaccines comprised of recombinant SA11 rotavirus corelike particles (CLP) or virus-like particles (VLP). *Vaccine* 14:1303-1312.
  18. Saif, L. J. and F. Fernandez. 1996. Group A rotavirus veterinary vaccines. *J. Inf. Dis.* 171:598-106.
  19. Yuan, L., S. Kang, L. Ward, T. To & L. J. Saif. 1998. Antibody-secreting cell responses and protective immunity assessed in gnotobiotic pigs inoculated orally or IM with inactivated human rotavirus. *J. Virol.* 72:330-338.
  20. Zhang, M., C. Q.-Y. Zeng, Y. Dong, J. M. Ball, L. J. Saif, A. P. Morris, and M. K. Estes. 1998. Mutations in rotavirus nonstructural glycoprotein NSP4 are associated with altered virus virulence. *J. Virol.* 72:3666-3672.
  21. Chang, K.O., Y.J. Kim and L. J. Saif. 1998. Comparisons of nucleotide and deduced amino acid sequences of NSP4 genes of virulent and attenuated pairs of group A and C rotaviruses. *Virus Res.* 18:224-233.
  22. Guo, M., K.O. Chang, M.E. Hardy, Q. Zhang, A.V. Parwani and L.J. Saif. 1999. Molecular characterization of a porcine enteric calicivirus genetically related to Sapporo-like human caliciviruses. *J. Virol.* 73:9625-9631.
  23. Yang, K., S. Wang, K. Chang, S. Lu, L. J. Saif, H. Greenberg, J. Brinker and J. Herrmann. 2001. Immune responses and protection obtained with rotavirus VP6 DNA vaccines given by intramuscular injection. *Vaccine* 19:3285-3291.
  24. Yuan, L., A. Geyer and L. J. Saif. 2001. Short-term immunoglobulin A B-cell memory resides in intestinal lymphoid tissues but not in bone marrow of gnotobiotic pigs inoculated with Wa human rotavirus. *Immunology* 103:188-198.
  25. Guo, M., J.F. Evermann, and L.J. Saif. 2001. Detection and molecular characterization of cultivable caliciviruses from clinically normal mink and enteric caliciviruses associated with diarrhea in mink. *Arch. Virol.* 146:479-493.
  26. Guo, M., Y. Qian, K.O. Chang and L. J. Saif. 2001. Expression and self-assembly in baculovirus of porcine enteric calicivirus capsids into virus-like particles and their use in ELISA for antibody detection in swine. *J. Clin. Microbiol.* 39:1487-1493.
  27. Yuan, L., C. Iosef, M.M.S. Azevedo, Y. Kim, Y. Qian, A. Geyer, K.O. Chang and L. J. Saif. 2001. Protective immunity and antibody-secreting cell responses elicited by combined oral attenuated Wa human rotavirus (HRV) and intranasal Wa 2/6-VLPs with mutant *Escherichia coli* heat-labile toxin (LT-R192G) adjuvant in gnotobiotic pigs. *J. Virol.* 75:9229-9238.
  28. Guo, M., J. Hayes, K.O. Cho, A.V. Parwani, L.M. Lucas and L. J. Saif. 2001. Comparative pathogenesis of tissue culture adapted and wild type Cowden porcine enteric calicivirus (PEC) in gnotobiotic pigs and induction of diarrhea by intravenous inoculation of wild type PEC. *J. Virol.* 75:9239-9251.
  29. Chang, K.O., O.H. Vandal, L. Yuan, D.C. Hodgins, and L.J. Saif. 2001. Antibody secreting cell responses to rotavirus proteins in gnotobiotic pigs inoculated with attenuated or virulent human rotavirus. *J. Clin. Microbiol.* 39:2807-2813.
  30. Iosef, C., T.V. Nguyen, K. Jeong, K. Bengtsson, B. Morein, Y. Kim, K.O. Chang, M.S.P. Azevedo, L. Yuan, P. Nielsen, and L.J. Saif. 2002. Systemic and intestinal antibody secreting cell responses and protection in gnotobiotic pigs immunized orally with attenuated Wa human rotavirus and Wa 2/6-rotavirus-like-particles associated with immunostimulating complexes. *Vaccine* 20:1741-1753.
  31. Iosef, C., K.O. Chang, M.S.P. Azevedo, L. Yuan and L.J. Saif. 2002.

- Systemic and intestinal antibody responses to NSP4 enterotoxin of Wa human rotavirus (HRV) in a gnotobiotic pig model for HRV disease. *J. Med. Virol.* 68:119-128.
32. Chang, K.O., Y. Kim, K.Y. Green and L.J. Saif. 2002. Cell culture propagation of porcine enteric calicivirus mediated by intestinal contents is dependent on the cyclic AMP signaling pathway. *Virology* 304:302-310.
  33. Smiley, J.R., K.O. Chang, J. Hayes, J. Vinje and L.J. Saif. 2002. Characterization of an enteropathogenic bovine calicivirus representing a potentially new calicivirus genus. *J. Virol.* 76:10089-10098.
  34. Chang, K.O., S. Sosnovtsev, G. Belliot, Y. Kim, L.J. Saif, K. Green. 2004. Bile acids are essential for porcine enteric calicivirus replication in association with down-regulation of STAT 1. *PNAS* 101:8733-8738.
  35. Smiley, J.R., A.E. Hoet, M. Traven, H. Tsunemitsu and L.J. Saif. 2003. RT/PCR assays for the detection of bovine enteric caliciviruses (BEC) and an analysis of the genetic relationships among BEC and human caliciviruses. *J. Clin. Microbiol.* 41:3089-3099.
  36. Han, M.G., J.R. Smiley, C. Thomas and L.J. Saif. 2004. Genetic recombination between two genotypes of genogroup III bovine noroviruses (BoNV) and capsid sequence diversity among BoNV and NB-like bovine enteric caliciviruses. *J. Clin. Microbiol.* 42(11): (in press).
  37. Han, M.G., Q. Wang, J.R. Smiley, K.O. Chang and L.J. Saif. 2004. Self-assembly of the recombinant capsid protein of a bovine norovirus (BoNV) into virus-like particles and evaluation of cross-reactivity of BoNV with human noroviruses. *J. Clin. Microbiol.* (accepted)

### Professional Service

- ▶ Elected Councilor, Conference of Research Workers in Animal Diseases, 1997
- ▶ Elected Vice President, Conference of Research Workers in Animal Diseases, 2000
- ▶ Elected President, Conference of Research Workers in Animal Diseases, 2001
- ▶ Elected Councilor, American Society of Virology, Veterinary Virology and Zoonotics area, 1998-2000
- ▶ Served on USDA Animal Health Special Competitive Grants and NRI, Animal health, competitive grants panels, 1990, 1998 and Ad hoc reviewer yearly
- ▶ Panel member, NIAID, NIH, 1985,1997; 2003 Vaccine Study section; 2004 Biodefense and Emerging Infectious Diseases
- ▶ Currently on editorial board, *Journal Virology* and *Archives of Virology*, Reviewer, *PNAS*
- ▶ Symposia co-organizer, co-chair--various international scientific meetings
- ▶ U.S. Cooperating Scientist (Advisor), Neonatal Diseases of Bovine, Trinational (US, Israel, Egypt) Animal Health Program, USAID, 1990-1995
- ▶ Appointed Member National Association Land Grant Universities Board on Agriculture Science and Technology Policy Committee, 1998-2000
- ▶ Board Member, American Association of Veterinary Immunologists (AAVI), 1991-1994
- ▶ Elected Councilor and Vice President, President (2001) Conference of Research Workers in Animal Diseases, 1997-2001
- ▶ Elected Councilor, American Society of Virology, 1998-2001
- ▶ Member of Advisory Team on SARS Coronavirus for the Centers of Disease Control and Prevention, Atlanta, GA, 2003
- ▶ Advisor to the Scientific Advisory Committee on SARS Coronavirus for the World Health Organization, Geneva, Switzerland, 2003
- ▶ Member of NAS Committee, Assessing the Nation's Framework for Addressing Animal Diseases, 2003-04
- ▶ Laboratory was appointed by the the World Health Organization, Geneva, Switzerland as an International Reference Laboratory for Animal Coronaviruses, 2004

### Contributions to Graduate/Postgraduate Education:

- ▶ Advised 17 PhD students
- ▶ Advised 9 MS students
- ▶ Mentored 44 post-doctoral and visiting scientists
- ▶ Currently advising 7 PhD, 1 MS students and 4 post-docs

### Research Interests

Enteric and respiratory viral infections of swine and cattle; passive and mucosal immunity to enteric and respiratory viral infections; mucosal viral vaccines; animal models for human enteric and respiratory viral infections; food-borne enteric viruses

### Grant Support - Principal or Co-Principal Investigator

- ▶ Currently supervising or co-supervising grants totaling about \$8.1 million in direct and indirect costs. Sources of current grant support: NRI, USDA; NIAID, NIH. Previous extramural research support totaled about \$6 million.
- ▶ List of grants, publications and presentations available on request (Saif.2@osu.edu)