

Curriculum Vitae

Lawrence B. Schook, Ph.D.

University of Illinois at Urbana-Champaign

Edward William and Jane Marr Gutgsell Professor *Emeritus*

Professor of Animal Sciences, Bioengineering, Nutritional Science, Pathobiology, Pathology
Professor, Institute for Genomic Biology

Affiliate Professor, Beckman Institute for Advanced Science and Technology

Affiliate Professor, National Center for Supercomputer Applications

Research Professor, Micro and Nanotechnology Laboratory

University of Illinois at Chicago

Professor of Pathology

Professor of Radiology

Professor of Surgery

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XIV. REFERENCES.....

I. RESUME. Lawrence B. Schook, Edward William and Jane Marr Gutsgell Professor *Emeritus* of Animal Sciences and Radiology retired December 31, 2021, previously served as the Vice President for Research at the University of Illinois, overseeing the technology commercialization and economic development activities across the University's three campuses (Urbana-Champaign, Chicago, Springfield). Previously he served as founding Director, UIUC Division of Biomedical Sciences and the founding Woese Institute for Genomic Biology (IGB) Theme Leader for Regenerative Biology and Tissue Engineering. As Director of the Division of Biomedical Sciences he led the development of the Mayo-Illinois Alliance for Individualized Medicine to link health and technology. Schook is a recognized international scholar in comparative genomics and is known for leading the pig genome-sequencing project, which has provided researchers insights into the genetic control of animal diseases as well as diseases including cancer and other chronic diseases. He is a noted entrepreneur who has launched three medical application startup companies. As Vice President for Research for the University of Illinois he provided a unified voice for the research enterprise (\$1B) at the university level, across all three campuses, including overseeing the enterprise-wide system of technology and economic development, facilitating collaborative research opportunities, streamlining related policies and procedures, and helping communicate the university's research vision to internal and external constituencies and led the creation of the DOD funded UI Labs to establish the innovation center for digital manufacturing in Chicago. Schook is a Professor of Animal Sciences, Bioengineering, Pathobiology, Nutritional Sciences, Pathology and Surgery. He also is a Professor in the IGB and holds Affiliate Faculty appointments at the Beckman Institute for Advanced Science and Technology and the Holonyak Micro and Nanotechnology Laboratory. He held an Affiliate Scientist position at the Carle Foundation Hospital and was Co-Chair of the Carle Biomedical Research Center Steering Committee. While at the University of Minnesota, he was Associate Dean for Research at the College of Veterinary Medicine and Co-Chaired the Provost's Research Design Team for the Academic Health Center. In addition, he was the founding director of the Food Animal Biotechnology Center and the Advanced Genomic Analysis Center (campus genome center).



He attended Albion College and received his M.S. and Ph.D. from Wayne State School of Medicine. After postdoctoral training at the Institute for Clinical Immunology in Switzerland and the University of Michigan he has held faculty positions at the Medical College of Virginia, University of Minnesota and a visiting Professor at the Ludwig Cancer Center of the University of Lausanne. A recipient of NIH, Swiss National Fund and Pardee Fellowships, he was named a UIUC University Scholar, received the Funk Award for Meritorious Achievements in Agriculture, the H. H. Mitchell Award for Graduate Teaching and Research, the Pfizer Animal Health Research Award, and is an elected Fellow of the American Association for the Advancement of Science. He was appointed a Fellow at the National Center for Supercomputer Applications and the Academy for Entrepreneurial Leadership. He is also the recipient of a Fulbright Distinguished Chair Fellowship (Human Genetics and Genomics) at the University of Salzburg and the Distinguished Alumni Award from Albion College. He served on the National Academy of Sciences, Medicine and Engineering Council for the Institute for Laboratory Animal Research (ILAR) and is co-Editor-in-Chief of the *ILAR Journal*.

Schook has served as an advisor to corporations, universities, non-governmental and governmental agencies with respect to medical models, genomics and animal biotechnology. He has or is serving on the Governor's Illinois Innovation Council, the Albion College Board of Trustees, the Board of Governors for the Argonne National Laboratory, the Board of the Directors for the Fermi National Accelerator Laboratory, He has served on the Board of Directors for the Illinois Biotechnology Organization and the Agricultural Biotechnology International Conference Foundation and the BIO Governing Board on Food and Agriculture. Professor Schook chaired the Executive Steering Committee of the Alliance for Animal Genome Research and was Project Director for the International Swine Genome Sequencing Consortium and the International Pig SNP Chip consortium.

His scholarly activities include over 265 manuscripts, 300 abstracts, and 9 edited books/works and he was the founding editor of *Animal Biotechnology*. He has given over 225 seminars and presentations to international congresses and universities around the world. In addition to serving as the major advisor to 38 M.S. and Ph.D. students he has mentored 35 postdoctoral fellows/scholars and 43 undergraduate students. As Principal Investigator, he has received over \$75 M (\$25 million as PI) in sponsored research from governmental and industrial sources.

I. PERSONAL CONTACT INFORMATION

University of Illinois-Urbana-Champaign
382 Edward R Madigan Laboratory, MC-051
University of Illinois
1201 West Gregory Drive, Urbana, IL 61801
217-244-3156
schook@illinois.edu
<http://comparativegenomics.illinois.edu/>

University of Illinois-Chicago
Department of Radiology
1301 West Taylor Street
1309 Outpatient Care CenterOffice:
Chicago, IL 60612
312-413-3964

Birth place: Mt. Clemens, MI, USA; U.S. Citizen

Family: Married with two sons, one daughter and seven grandchildren

II. EDUCATION

- Jul 1994 Short Course in Medical and Experimental Mammalian Genetics
The Jackson Laboratory, Bar Harbor, ME
- 1992-1993 Visiting Professor, Ludwig Institute for Cancer Research
University of Lausanne, Lausanne, Switzerland
Sponsor: Professor Jean-Charles Cerottini, M.D.
- Jun-Jul 1989 Visiting Scientist, Division of Immunogenetics
Institute for Animal Research, Veterinary School, University of Berne
Berne, Switzerland
Sponsor: Professor Sandor Lazary, D.V.M., Ph.D.
- 1979-1981 Postdoctoral Fellow
The University of Michigan School of Medicine
Departments of Microbiology and Immunology, and Surgery, Ann Arbor, MI
Mentor: John E. Niederhuber, M.D.
- 1978-1979 Postdoctoral Fellow
Institute of Clinical Immunology, University of Berne, Berne, Switzerland
Mentor: Professor Alain L. de Weck, M.D.
- 1975-1978 Ph.D. Wayne State School of Medicine
Department of Immunology and Medicine, Detroit, MI
Advisor: Richard S. Berk, Ph.D.
Thesis: "Inorganic sulfur metabolism in the heterotroph *Pseudomonas aeruginosa*"
- 1972-1975 M.S. Wayne State School of Medicine
Department of Immunology and Medicine, Detroit, MI
Advisor: Richard S. Berk, Ph.D.
Thesis: "Experimental studies on mice challenged perorally with *Pseudomonas aeruginosa*"
- 1968-1972 B.A. (Biology) Albion College, Albion, MI
Advisor: Professor Kenneth Ballou
Research Project: "Antibacterial effectiveness of detergents on *Pseudomonas* growth"

III. ACADEMIC POSITIONS

2018-present	Affiliated Professor, National Center for Supercomputer Applications
2016-present	Professor of Radiology
2012-2015	Member, UI Cancer Center and Internal Advisory Board
2009-present	Professor of Bioengineering
2008-present	Professor of Pathology
2008-present	Professor, Micro and Nanotechnology Laboratory
2007-present	Professor of Surgery (formerly Surgical Oncology)
2007-2011	Affiliate Scientist, Carle Foundation Hospital
2007-present	Edward William and Jane Marr Gutgsell Professor (2007-2012; 2012-2017; 2017-2022)
2006-present	Affiliate Professor, Beckman Institute for Advanced Science and Technology
2005-2015	Faculty Fellow, Academy for Entrepreneurial Leadership
2004-present	Professor, Institute for Genomic Biology (IGB)
2003-present	Professor, Division of Nutritional Sciences, University of Illinois
2002-2003	Faculty Fellow, National Center for Supercomputer Applications
2001-present	Professor of Comparative Genomics, Departments of Animal Sciences and Veterinary Pathobiology, University of Illinois
2001- 2006	Program Director, USDA Multidisciplinary Graduate Training Program on "Agricultural Genome Sciences and Public Policy", University of Illinois
2001- 2006	Adjunct Professor of Veterinary PathoBiology, University of Minnesota
2000-2001	Charter Member, Biomedical Genomics Center; Co-Leader, Immunogenetics Group, University of Minnesota Academic Health Center
1995	Visiting Professor, Institute of Agribiotechnology, China Agricultural University
1994-2000	Full Member, University of Minnesota Cancer Center
1993-2000	Professor, Department of Veterinary PathoBiology, University of Minnesota
1993-2000	Professor, Department of Animal Science, University of Minnesota
1992-1993	Invited Professor, Faculty of Medicine, University of Lausanne, Lausanne, Switzerland
1990-1993	Professor of Molecular Immunology, Department of Animal Sciences, College of Agricultural, Consumer and Environmental Sciences, University of Illinois
1986-1993	Member, University of Illinois Biotechnology Center
1986-1990	Associate Professor of Molecular Immunology, Department of Animal Sciences, University of Illinois at Urbana-Champaign
1986-1987	Affiliate Associate Professor of Immunology, Department of Microbiology and Immunology, Medical College of Virginia, Richmond, VA
1983-1986	Affiliate Assistant Professor, Department of Biology, Virginia Commonwealth University, Richmond, VA
1982-1986	Assistant Professor, Department of Microbiology and Immunology, Member, Massey Cancer Center, Medical College of Virginia, Richmond, VA

1981 Assistant Research Scientist, Department of Microbiology and Immunology and Surgery, The University of Michigan School of Medicine, Ann Arbor, MI

IV. ADMINISTRATION AND PROFESSIONAL EXPERIENCES

University Administrative and Advisory Appointments

2015-2016 Executive Risk Management Committee, UI
 2011-2016 Vice President for Research, UI
 2011-2016 President's Cabinet and University Executive Officer, UI
 2010-2011 Chancellor's Senior Executive Council, UIUC
 2010-2011 Co-Director, Carle Biomedical Research Center
 2010-2011 Founding Co-Chair, Mayo-Illinois Alliance for Individualized Medicine
 2009-2011 Deans and Directors Council, UIUC
 2008-2011 Director, Division of Biomedical Sciences, UIUC
 2008-2011 Advisory Board, Academy for Entrepreneurial Leadership
 2007-2010 Director, Carle Foundation Hospital/IGB Stem Cell Facility
 2007-2011 Executive Committee, Certificate in Entrepreneurial Leadership program
 2004-2008 Director, IGB Theme on Regenerative Biology and Tissue Engineering
 2004-2008 Executive Committee, Institute for Genomic Biology (IGB), U. of Illinois
 1998-1999 Director, Center for Excellence in XenoDiagnostics, University of Minnesota
 1997-2000 Associate Dean for Research and Graduate Programs, College of Veterinary Medicine, University of Minnesota
 1994-1996 Re-engineering Program/Co-Chair, Research Team, Office of Provost, Academic Health Center, University of Minnesota [50% appointment]
 1995-1998 Founding Director, NSF-funded Advanced Genetic Analysis Center, U. of Minnesota
 1994-2000 Executive Committee, Center for Immunology, University of Minnesota
 1993-2000 Founding Director, Food Animal Biotechnology Center, University of Minnesota
 1993-1997 Chair, Department of Veterinary PathoBiology, University of Minnesota
 1986-1993 Founding Director, Transgenic Animal Facility and Member, Biotechnology Center Executive Advisory Committee, University of Illinois
 1983-1986 Founding Director, Hybridoma Laboratory and Member, Scientific Advisory Committee, Massey Cancer Center, Medical College of Virginia

External Board and Advisory Appointments

2020-present Founding Scientist and Chief Scientific Officer, Sus Clinicals, Inc.
 2017-present National Research Facility for Phenotypic and Genotypic Analysis of Model Animals, Scientific Advisory Committee, Beijing, China
 2017-2019 Translational Research for Innovative Oncology (TRIO, Inc.) (Not for Profit), Board of Directors
 2016-present Memphis Meats, Inc., External Advisory Board
 2016-present Onclavus, Inc., Board of Directors
 2016-2017 Council Member, Current Innovation (Not for Profit), Chicago, IL
 2016 Board of Directors, Illinois Chamber of Commerce
 2015-present Illinois Technology Association Internet of Things (IoT) Council

2014-2016	Steering Committee, Illinois Manufacturing Laboratory (IML)
2013-2019	Founding Board Member, UI LABS (2013-2016, 2016-2019) Chair, Science and Technology Advisory Board (2013-2016; 2017-2020), Technology Committee (2016-2019)
2013	Steering Committee, BIO 2013, Chicago, IL
2012-2020	National Academy for Sciences, Medicine and Engineering Council Member, Institute for Laboratory Animal Research (2012-2015, 2015-2018, 2018-2020); Co-Editor-in-Chief, <i>ILAR Journal</i> (2016-2020)
2012-present	Board of Trustees, Albion College, Albion, MI (2012-2015; 2015-2018; 2018-2021) Co-Chair, Executive Committee, 2014-present Chair, Student and Academic Affairs, 2014-2000, Member, 2012-2020; Chair, Academic Affairs Committee, 2012-present; Chair 2018-present Member, Provost Search Committee, 2014 Member, Presidential Search Committee, 2013 Member, Infrastructure Committee, 2012
2011-2016	Board of Governors, Argonne National Laboratory Environment, Safety, Security and Health Committee Meeting Administrative and Budget Committee Meeting
2011-2015	Board of Directors, Fermi National Accelerator Laboratory Administration and Finance Committee Science Planning Committee
2011-2014	Illinois Innovation Council (appointed by Governor Quinn)
2009-2011	Scientific Advisory Board, Focused Genomics, Inc.
2007-2010	Chair, Scientific Advisory Board, Real-Time Genomics, Inc.
2007-2019	General Manager, Argo Consulting Group
2003-2013	Chair, International Swine Genome Sequencing Consortium
2002-2008	Board Member, Illinois Biotechnology Industry Organization
2002-2005	Board Member, Food and Agriculture Governing Board, Biotechnology Industry Organization
2002	Organizing Committee, National Academy of Sciences National Research Council "Exploring Horizons for Domestic Animal Genomes"
2001-2009	Chair of Steering Committee, Alliance for Animal Genome Research
2001-2003	Scientific Advisory Board, Collaborative Funding Assistance, North Carolina Biotechnology Center
2001-2002	Committee Member, National Academy of Sciences National Research Council, "Scientific Concerns of Animal Biotechnology"
2001-2002	Consultant to the President, Utah State University, Task Force on Genomic Sciences
1999-2006	Board Member, Member of Scientific Advisory Board, Pyxis Genomics (previously AniGenics, Inc.); Served as President and CSO, 2002-2004
1998-2007	Board Member, Agricultural Biotechnology International Conference (ABIC) Foundation
1998-2003	International Evaluation Committee, Organized Research Combination System (ORCS), National Children's Medical Research Center, Tokyo, Japan
1997-2000	Board Member, Integrative Genomics, L.L.C.
1996-1997	Consultant and Chair, GRAS Committee, DCV Biologics

1995-1996	Scientific Advisory Board, American Kennel Club
1994-1997	Scientific Advisory Board, North Carolina Biotechnology Center
1994-1995	Consultant, Dow Corning
1994	Advisory Committee, Texas A&M NIH Program Project
1993, 1996	Key Consultant, UNDP/FAO (Animal Biotechnology)
1993	Consultant, Pig Improvement Co.
1991-1994	Consultant, Marion Merrell Dow, Inc. (Immunology)
1991	Consultant, UNDP/FAO (Biotechnology and Immunology)
1990	Consultant, OAI, The Netherlands
1989	Consultant, Chemical Industry Inst. of Toxicology, Research Triangle Park, NC
1987-1990	President and Chairman, Board of Directors, Midwest Molecular Diagnostics, Inc.
1987	Consultant, International Minerals & Chemical Co., Terre-Haute, IN
1986-1988	Consultant, Alcon Laboratories, Fort Worth, TX
1985-1986	Consultant, Lim Technology Laboratories, Richmond, VA
1975-1979	Consultant, Cartel Consulting Co., Detroit, MI

V. RANK, TENURE, AND GRADUATE FACULTY STATUS

- A. Medical College of Virginia
Assistant Professor, Non-tenured, Department of Microbiology and Immunology
Member of Graduate Faculty, 1981-1986
Member of Graduate Program: NIH Tumor Immunology Training Program, 1981-1986
- B. University of Illinois at Urbana-Champaign
Professor, Tenured, Department of Animal Sciences, University of Illinois, 1986-1993
Indefinite Membership in Graduate Faculty, 1986-1993
Member of Graduate Programs:
 - Genetics Graduate Faculty
 - NIH Cell and Molecular Biology Training Program (Executive Committee)
 - USDA Molecular Basis of Disease Fellowship Program
 - USDA Molecular and Cell Biology of Domestic Animal Production (Program Director)
 - USDA Genetics Program (Program Director)
- C. University of Minnesota
Professor, Tenured, Department of Veterinary PathoBiology
Indefinite Member in Graduate Faculty, 1993-2000
Member of Graduate Programs:
 - Animal Science
 - Microbiology, Immunology, and Molecular PathoBiology
 - Molecular, Cellular, Developmental Biology, and Genetics
 - Molecular Veterinary Biosciences
 - Toxicology
 - Veterinary Medicine
 - USDA Food Animal Biotechnology Fellowship Program (Executive Committee)
 - NIH Biotechnology Training Grant, Participating Faculty
- D. University of Illinois at Urbana-Champaign

Professor, Tenured, Department of Animal Sciences, University of Illinois, 2001-present

Indefinite Membership in Graduate Faculty, 2001-present

Member of Graduate Programs:

Animal Sciences

Bioengineering

Nutritional Sciences

Veterinary Pathobiology

NIH Cell and Molecular Biology Training Grant

Director, USDA Training Grant "Agricultural Genome Sciences and Public Policy", 2001-2006

NSF IGERT Training Grant "Training the Next Generation of Researchers in Cellular and Molecular Mechanics and BioNanotechnology"

VI. RECOGNITIONS AND OUTSTANDING ACHIEVEMENTS

A. Awards and fellowships

1. Fiske Award (Scholar-Service), Albion College, 1972
2. Graduate Fellowship, Wayne State University, 1972-1978
3. Fogerty International Postdoctoral Fellowship (11.679.0.78) from the Swiss National Fund for Scientific Research, 1978-1979
4. NIH Postdoctoral Fellowship (F32 CA 06268-02), 1978-1980
5. NIH Postdoctoral Fellowship (F32 CA 06268-03), 1980-1981
6. Elsa Pardee Foundation Postdoctoral Fellowship, 1980-1981
7. American Association of Immunology Travel Award, Fourth World Congress of Immunology, Paris, France, 1980
8. NCI Travel Award, Seventh Intl. Conf. on Germinal Centers and Lymphoid Tissues in Immune Reactions, Groningen, Netherlands, June 1981
9. American Cancer Society (Virginia Branch) Visiting Scientist Program, 1984-1985
10. IBM Research Award for "Genetic Basis of Disease," Research Board, UIUC, 1987
11. University of Illinois H. H. Mitchell Award for Excellence in Graduate Training and Research, 1990
12. University Scholar, University of Illinois, 1990-1993
13. Paul A. Funk Award for Meritorious and Outstanding Research, 1992
14. Distinguished Alumni Award, Albion College, 1996
15. Pfizer Award for Research Excellence, 1997
16. Silver Award, Agricultural Communication and Education Critique Award, 1999
17. Faculty Excellence Program, University of Illinois at Urbana-Champaign, 2001
18. Faculty Fellow, National Center for Supercomputer Applications, 2002-2003
19. Faculty Fellow, Academy for Entrepreneurial Leadership, 2005-present
20. Elected Fellow, American Association for the Advancement of Science, 2005
21. Edward William and Jane Marr Gutgsell Professor, UIUC, 2007-2012, 2012-2017, 2017-2022
22. Selected as Chancellor's "Faculty All Star" (1 of 16 selected across UIUC campus), 2008
23. Fulbright Distinguished Chair in Human Genetics and Genomics, U. of Salzburg, 2010
24. Chancellor's 9th Annual Center for Advanced Study Lecture, 2010
25. Convocation Speaker, UIUC, 2010
26. Department of Agriculture Secretary 2010 Riley Memorial Foundation Special Recognition, International Swine Genomic Sequencing Consortium
27. Mid-Continent Regional Federal Laboratory Consortium (FLC) award for excellence in technology transfer- the International Porcine SNP Consortium, 2011

28. Appointed to National Academy of Sciences Council for the Institute Laboratory Animal Research (2012-2015, 2015-2018, 2018-2020)
29. Crain's Chicago Business Top 50 Technies, 2013
30. Mahr Endowed One Health Lecture, Iowa State University, April 11, 2018
31. Class of 1963 Distinguished Lecturer, Oklahoma State University, November 14, 2019

B. Membership in professional societies

1. American Association for the Advancement of Science
2. American Association of Immunology
3. American Association of Veterinary Immunology
4. American Society for Microbiology
5. American Society of Animal Science
6. American Society of Human Genetics
7. Association of Medical Laboratory Immunologists, Charter Member
8. Beta Beta Beta
9. International Chamber of Agriculture, Founding Member
10. International Society for Animal Genetics
11. National Registry of Microbiology, American Academy of Microbiology
12. Society of Experimental Biology and Medicine
13. Society for Leukocyte Biology (Reticuloendothelial Society)
14. Society of Sigma Xi
15. Society of Toxicology, Full Member

C. Licensure and Certifications

1. Registered Microbiology (RM), #1223973 (Certificate No. 1620), 1975
National Registry of Microbiology, American Academy for Microbiology (Renamed in 2009;
National Registry of Certified Microbiologists (NRCM))
2. Good Laboratory Practice (GLP) Training Program
Research Service Organization, Academic Health Center, Univ. of Minnesota, 1998
3. Good Clinical Practice (GCP) Training Program
Research Service Organization, Academic Health Center, Univ. of Minnesota, 1998

D. Patents

1. Shaw, J.M., L.B. Schook, and W.M. Regelson. (1992). Acetylated low density lipoproteins: a delivery system to phagocytic cells for stimulating immunologic response and host resistance. *U.S. Patent No. 5,084,441*. Washington, DC: U.S. Patent and Trademark Office (Issued 01/28/92).
2. Schook, L.B., R. Gaba, K.M. Schnaitschieder, R.M. Schwind. Modeling Oncology on Demand. U.S. Provisional Patent Application No. 62/813,307. (Filed March 4, 2019).
3. Schook, L.B., R. Gaba, K.M. Schnaitschieder, R.M. Schwind. Modeling Oncology on Demand. PCT Application No. PCT/US2020/020837 (March 3, 2020).

VII. SERVICE, COMMITTEES AND OUTREACH

A. Editorial responsibilities

1. *Ad Hoc*, Acta Biochimica et Biophysica Sinica
2. *Ad Hoc*, American Journal of Veterinary Research
3. *Ad Hoc*, Animal Genetics
4. *Ad Hoc*, BioTechniques

5. *Ad Hoc*, Biotechnology
 6. *Ad Hoc*, BMC Genomics
 7. *Ad Hoc*, Cell Genet Selection
 8. *Ad Hoc*, DNA and Cell Biology
 9. *Ad Hoc*, Genetics
 10. *Ad Hoc*, Genome Research
 11. *Ad Hoc*, Genomics
 12. *Ad Hoc*, Immunopharmacology
 13. *Ad Hoc*, Journal of Heredity
 14. *Ad Hoc*, Journal of Immunology
 15. *Ad Hoc*, Journal of Leukocyte Biology
 16. *Ad Hoc*, Life Sciences
 17. *Ad Hoc*, Mammalian Genome
 18. *Ad Hoc*, Molecular Pharmacology
 19. *Ad Hoc*, *Physiological Genomics*
 20. *Ad hoc*, *PLoS One*
 21. *Ad Hoc*, *Proceedings of the National Academy of Sciences*, U.S.A.
 22. *Ad Hoc*, *Science*
 23. *Ad Hoc*, *Toxicology and Applied Pharmacology*
 24. *Ad Hoc*, *Veterinary Immunology and Immunopathology*
 25. *Ad Hoc*, *Nature*
 26. *Ad Hoc*, *Epigenomics*
 27. Editorial Board, *Animal Biotechnology*, Editor-in-Chief, 1990-2018; Associate Editor 2019-present
 28. Editorial Board, *Fundamental and Applied Toxicology*, 1992-1995, 1995-1998
 29. Editorial Board, *Toxicological Sciences*, 1998-2001
 30. Editorial Board, *Journal of Biomedicine and Biotechnology*, 2008-2016
 31. Review Editor, *Frontiers in Livestock Genomics*, 2011-present
 32. Editorial Board, *Mammalian Genome*, 2012-2017; 2017-2022
 33. Editorial Board, *Frontiers in Oncology*, 2016-present; Associate Editor, 2020- present
 34. Editorial Board, *ILAR Journal*, 2016-present; Co-Editor-in-Chief, 2017-2020
- B. Participation in regional, national, and international meetings
1. Judge, American Society for Microbiology Student Presentations, Virginia Branch, Richmond, VA, December 4, 1982
 2. Organizer, Conference: Scientific and Economic Impacts of Hybridoma Biotechnology, Science Attachés Program, AAAS and ASM, Washington, D.C., November 17, 1983
 3. Convener, American Society for Microbiology Meeting, Virginia Branch, Charlottesville, VA, December 2-3, 1983
 4. Organizer, Workshop:Hybridomas and Monoclonal Antibodies, Richmond, VA, April 2, 1984
 5. Organizer, Conference: Recent Advances and Applications of Immunology, Scientific Attachés Program, AAAS and ASM, Washington, D.C., October 23, 1984
 6. Organizer, Immunobiology of Transplantation in Neoplasia Symposium, Massey Cancer Center, Medical College of Virginia, Richmond, VA, October 25, 1984
 7. Moderator, American Cancer Society Meeting, Virginia Beach Affiliate, Norfolk, VA, March 23, 1985
 8. Organizer and Co-Chair, Antigen Presenting Cells: Diversity, Differentiation, and Regulation, International Society of Leukocyte Biology Symposium, Richmond, VA, March 26-29, 1987

9. Awards Committee Member, Mid-West Immunology Meeting, St. Louis, MO, October 28-31, 1987
10. Program Committee Member, Immunotoxicology Section, Society of Toxicology National Meeting, New Orleans, LA., 1989
11. Chair, Mechanisms in Immunotoxicology, Society of Toxicology National Meeting, Atlanta, GA, February 27 – March 3, 1989
12. Workshop Coordinator, Midwest Immunology Conference, St. Louis, MO, November 4-7, 1989
13. Organizer and Co-Chair, Macrophage-Xenobiotic Interactions: Modulation of Toxicity and Macrophage Functions, National Meeting of the Society of Toxicology, Miami Beach, FL, February 12-16, 1990
14. Organizer and Chair, Allerton Conference: Gene Mapping of Domestic Animal Genomes: Needs and Opportunities, Monticello, IL, April 8-10, 1990
15. Chair, Autumn Immunology Conference, Chicago, IL, November 23-25, 1991
16. Convenor, Regulation of Stem Cell Growth and Differentiation, Autumn Immunology Symposium, November 25, 1991
17. NPPC Representative to European Economic Community Meeting on Swine Gene Mapping, Toulouse, France, December 6-7, 1991
18. Organizing Committee, NCR-150 Symposium: Animal Biotechnology: Technology Transfer and Industrial Needs, National Live Stock and Meat Board, May 17-19, 1992
19. CSRS Representative to European Community Meeting on Swine Gene Mapping, Copenhagen, Denmark, November 26-27, 1992
20. Co-Organizer, National Animal Genome Committee, Salt Lake City, UT, November 18, 1993
21. Co-Organizer, International Workshop on Swine Chromosome 6, Minnesuing Acres, WI, September 23-26, 1994
22. Co-Organizer, International Course on Analysis of Genomes and Genes: A Step Towards Molecular Animal Breeding, Beijing Agricultural University, Beijing, PRC, June 1995
23. Co-Organizer, Food Animal Biotechnology Center Inaugural Symposium, University of Minnesota, St. Paul, MN, June 23, 1995
24. Organizer, Applied Biosystems Inc. Automated Genotyping Workshop, University of Minnesota, St. Paul, MN, September 19-21, 1995
25. Co-Organizer, International Workshop on Swine Chromosome 7, Minnesuing Acres, WI, September 21-24, 1995
26. Co-Organizer, International Symposium, Swine in Biomedical Research, University of Maryland University College, College Park, MD, October 22-25, 1995
27. Chair and Co-Organizer, Conference: Allerton II: Genetic Analysis of Economically Important Traits in Livestock, Monticello, IL, November 6-9, 1996
28. Scientific Advisor and Session Chair, Impact of Molecular Biology on Animal Health and Production Research, Cambridge Healthtech Institute, Baltimore, MD, March 10-11, 1997
29. Chair, College of Agricultural Food and Environmental Sciences Global Event, St. Paul, MN, May 13, 1997
30. Co-Organizer, International Course on Animal Biotechnology, China Agricultural University, Beijing, PRC, June, 1997
31. Co-Organizer and Chair, Food Animal Biotechnology Center Symposium: Biotechnologies of Animal Disease Resistance, St. Paul, MN, June 2-3, 1997
32. Scientific Committee, Beijing International Conference on Animal Biotechnology, China Agricultural University, Beijing, PRC, June 11-14, 1997

33. Organizer, DNA-Based Diagnostics Workshop, Leman Conference, St. Paul, MN, September 20-22, 1997
34. Organizing Committee, Workshop on Strategic Planning for Global Comparative Genomics Database, Minnesuing Acres, WI, November 2-5, 1997
35. Organizing Committee, International Society for Animal Cytogenetics, St. Paul, MN, June 14-18, 1998
36. Chair, Marker Assisted Selection Plenary Session, International Society for Animal Genetics, Auckland, New Zealand, August 9-14, 1998
37. Chair and Organizer, Congress of International Society for Animal Genetics, Minneapolis, MN, July 22-26, 2000
38. Organizing Chair, USDA Workshop: Allerton III: Beyond Livestock Genomics: A Roadmap for Harvesting the Promise, Monticello, IL, July 9-10, 2002
39. Organizing Chair, NIH and USDA Workshop: Swine in Biomedical Research, Chicago, IL, January 27-29, 2005
40. Organizing Chair, Conference: Allerton IV: Confronting The Last Frontier: Phenotypes, Monticello, IL, October 27-28, 2008
41. Organizing Chair, Pig Genome III, Wellcome Trust Sanger Institute, Cambridge, UK, November 7-9, 2009
42. Chair of Organizing Committee, First International PigEvoDiv Conference, Genomics of Pig (*Sus scrofa*): Evolution and Diversity, Porto Conte Ricerche Center Alghero, Sardinia, Italy, April 6-10, 2010
43. Member, Scientific Program Committee, 32nd Conference of the International Society for Animal Genetics, Edinburgh, UK, July 26-30, 2010
44. Co-Chair, Diamond v. Charkabarty 30th Anniversary Symposium: Exploring the Scientific and Economic Implications, Champaign, IL, September 22-23, 2010
45. Organizing Committee, Second International PigEvoDiv Conference, Genomics of Pig (*Sus scrofa*): Evolution and Diversity, Chalkidiki, Macedonia, Greece, May 3-8, 2011
46. Chair, Organizing and Program Committee, Conference: Swine in Biomedical Research, Chicago, IL, July 19-22, 2011
47. Organizing Committee, Conference: Swine in Biomedical Research, Raleigh, NC Jul 6-8. 2014
48. Organizing Committee, Conference: Swine in Biomedical Research, Baltimore, MD September 23-25, 2017

C. Grant/program reviews

1. Grant Review, Center for Innovative Technology (Biotechnology) Commonwealth of Virginia, 1985-1986
2. NIH Ad Hoc Review, "Treatment or prevention directed at malignancies and the opportunistic infections associated with HTLV-III/LAV infections," Spring, 1986
3. NIH Ad Hoc Review, "Clinical, toxicological, pharmacokinetic, microbiological, and immunological studies of candidate drugs for the treatment of HTLV-III/LAV infections," Spring, 1986
4. Grant Review, Thomas F. Jeffress and Kate Miller Jeffress Memorial Trust, 1986
5. NIH Ad Hoc Review Program Project, "Biotechnology of microencapsulated T cell hybridomas," Spring, 1988
6. Grant Review, USDA Cooperative Research Program with India, Spring, 1988
7. Grant Review, USDA Competitive Grants Program (Animal Molecular Biology), Spring, 1988
8. Grant Review, Research Board, University of Illinois, 1988, 1989, 1990, 2008, 2009, 2010

9. Grant Review, UIUC Agriculture Research Station, HATCH Proposals, 1988
10. Panel Member, USDA Competitive Grants, Animal Molecular Biology and Brucellosis, 1989
11. NIH, Ad Hoc Review, Macrophage Biology, Spring, 1989
12. Grant Review Panel, American Heart Association-Illinois Affiliate, Spring, 1989
13. Member, Advisory Committee on Immunology to the President, Chemical Industry Institute of Toxicology, 1989
14. Panel Member, USDA Competitive Grants, Molecular Biology and Brucellosis, 1990
15. NIH Ad Hoc Review, Macrophage Biology, Spring, 1990
16. Grant Review, Agricultural Research Service, USDA, 1990
17. Grant Review, Small Business Innovative Research, USDA Competitive Research Grants, 1990, 1991, 1992
18. Grant Review, Agricultural Experiment Station, University of Maryland, 1991-1992
19. Grant Review, National Science Foundation, Program to Stimulate Competitive Research, 1991
20. Grant Review, Natural Sciences and Engineer Research Council, Research Council of Canada, 1991
21. Panel Manager, Animal Molecular Genetics, National Research Initiatives Competitive Research Grants Office, USDA, 1991-1992
22. Grant Review, National Science Foundation, Endocrinology Program, 1993
23. Grant Review, National Research Initiatives Competitive Research Grants Office, USDA, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
24. International Project Review, "Genome Functions and Molecular Mechanisms in Embryogenesis and Development," National Children's Medical Research Center, Japan, 1998-2001
25. Manuscript/Project Review, Meat Animal Research Center-ARS-USDA, 1998, 1999, 2000, 2003
26. Research Proposal Review, Swiss Federal Institute of Technology, Zurich, 1999
27. Panel Manager, Animal Genome and Genetic Mechanisms Program, National Research Initiatives Competitive Grants Program, USDA, 1999-2001
28. Program Review, Nebraska Research Initiative (biotechnology, and cell and molecular biology programs), 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006
29. Grant Review, The Wellcome Trust, 2000
30. Program Review, National Science Foundation, AAAS Research Competitiveness Service, 2001
31. Program Review, Utah State Functional Genomics Program, 2004
32. Program Review, National Research Foundation, South Africa, 2007
33. Program Review, Alberta Ingenuity Program, 2008, 2009
34. Program Review, EU Framework Program, 2008, 2009
35. Program Review, Horizon Programme, Netherlands Genomics Initiative, 2009
36. Program Review, Chilean National Commission for Scientific and Technological Research, 2009
37. Grant Review, Roy J. Carver Charitable Trust, 2010
38. Research Proposal Review, Archon Genomics X PRIZE Foundation, 2010
39. Panel Member, Special Emphasis Panel, National Center for Advancing Translational Sciences, NIH, 2012
40. Panel Member, Special Emphasis Panel, National Center for Advancing Translational Sciences, NIH, 2012
41. Panel Member, Special Emphasis Panel, Animal/Biological Resource Facilities, NIH, 2016

42. Panel Member, Special Emphasis Panel, Rapid Assessment of Zika Virus (ZIKV), NIH, 2016
43. Panel Member, Special Emphasis Panel, Improvement of animal models for stem cell-based regenerative medicine, NIH 2017
44. Panel Member, Review of Intramural Research Program, National Human Genome Research Institute, NIH, 2017
45. Member, Alternatives to Antibiotic Panel, USDA Agricultural Research Service Food Animal Health Programs, 2017
46. Fanconi Anemia Research Fund, 2019
47. NIH, Office of the Director, Strategic Plan for Animal Research, May 2020
48. German National Research, Review of National Program for Xenotransplantation, July 2020
49. Belgium Research Foundation, Review of Program for Animal Research, August 2020
50. North Carolina State University, Review of Comparative Medicine Institute, September 2020

D. Committees

1. Medical College of Virginia
 - a. Director, Hybridoma Laboratory, Massey Cancer Center, 1982-1986
 - b. Member, Massey Cancer Center, 1982-1986
 - c. Member, Graduate Student Committees (23 Ph.D.), 1982-1986
 - d. Coordinator, Immunobiology Courses, Medical College of Virginia, 1983-1985
 - e. Elected Alternate, University Council, 1983-1985
 - f. Co-Chair, Seminar Committee, 1983-1985
 - g. Member, Research Planning and Development Committee, Massey Cancer Center, 1983-1986
 - h. Member, University Patent Committee, 1983-1986
 - i. Member, New Student Committee, 1984
 - j. Member, University Program in Biotechnology, 1984-1986
 - k. Member, Chairman's Advisory Committee for Affiliate Appointments, 1985-1986
 - l. Member, Facilities Committee, 1985-1986
 - m. Member, Graduate Curriculum Committee, 1986-1987
2. University of Illinois at Urbana-Champaign
 - a. Member, Biotechnology Center, 1986-1993, 2001-present
 - b. Member, Advisory Committee for Cell Science Laboratory, 1987-1988
 - c. Member, Faculty Search Committee, Nutritional Biochemistry, 1987-1988
 - d. Member, Faculty Search Committee, Reproductive Physiology, 1987-1988
 - e. Chair, Committee on Recombinant DNA Review, 1987-1992
 - f. Coordinator, CSRS Review: Immunology, 1988
 - g. Member, Committee for Graduate Study, 1988-1989
 - h. Undergraduate Advisor, College of Agriculture, 1988-1993
 - i. Member, Steering Committee, USDA Biotechnology Training Grant: Molecular Biology of Infectious Diseases and Reproduction, 1988-1992
 - j. Interviewer, J. B. Turner Merit Scholarship Program, 1989
 - k. Member, Faculty Search Committee, Veterinary Pathobiology, 1989
 - l. Project Director, Fellowship Program in Molecular and Cell Biology of Domestic Animal Production, USDA Biotechnology National Needs, 1989-1994
 - m. Elected Member, Faculty Advisory Committee, Department of Animal Sciences, 1989-1991, 2007-2009
 - n. Director, Transgenic Animal Facility, 1989-1993

- o. Director, Program in Comparative Gene Mapping of Domestic Animals, 1989-1993
- p. Director, USDA National Needs Biotechnology Training Program: Molecular and Cellular Biology of Domestic Animal Production, 1989-1993
- q. Member, Faculty Search Committee, Nutritional Molecular Biologist, 1990
- r. Elected Member, Promotions and Tenure Committee, Department of Animal Sciences, 1990-1992, 2007-present
- s. Member, Coordinating Committee, Biotechnology Center, 1990-1992
- t. Chair, Faculty Search Committee, Growth and Development, College of Agriculture, 1991
- u. Chair, Secretarial Support Committee, College of Agriculture, 1991-1992
- v. Member, Admissions Committee, NIH Cell and Molecular Biology Training Grant, 1991-1992
- w. Member, College of Agriculture Fellowship Committee, 1991-1992
- x. Member, College of Agriculture Faculty Research Awards Committee, 1992
- y. Member, Search Committee, Director of the Flow Cytometry Lab, Biotechnology Center, 2001
- z. Member, Faculty Search Committee, Department of Immunology, School of Molecular and Cellular Biology, 2001
- aa. Member, Department of Animal Sciences Graduate Courses and Curricula Committee, 2001-2002
- bb. Member, Department of Animal Sciences Centennial Committee, 2001-2002
- cc. Member, ACES Paul A. Funk Recognition Award Selection Committee, 2001-2002
- dd. Member, Office of Technology Management Advisory Committee, 2001-2003
- ee. Member, ACES Paul A. Funk Recognition Award Selection Committee, 2002
- ff. ACES Representative, Campus Initiatives Retreat, 2002
- gg. Member, Faculty Search Committee, Genetics, 2002
- hh. Member, Department of Animal Sciences Graduate Courses and Curricula Committee, 2002
- ii. Member, Department of Animal Sciences Centennial Committee, 2002
- jj. Member, Faculty Search Committee, Department of Immunology, School of Molecular and Cellular Biology, 2003
- kk. Member, Nanotechnology Building Committee, 2003-2004
- ll. Chair, Search Committee, Director of Division of Animal Research, Office of the Vice Chancellor for Research, 2003-2004
- mm. Member, Department of Animal Sciences Graduate Program Committee, 2003-2005
- nn. Member, Center for Advanced Study MillerCom Lecture Series Committee, 2003-present
- oo. Member, Faculty Search Committee, Animal Behavior Genomics, School of Integrative Biology, 2004
- pp. Member, Committee to Enhance Industry Research, Office of the Vice Chancellor for Research, 2004-2005
- qq. Member, Translational Research Committee, Office of the Vice Chancellor for Research, 2004-2005, 2005-2007
- rr. Member, Provost's Committee on Pathobiology, 2004-2005
- ss. Member, Faculty Search Committee, Mammalian Development, Department of Animal Sciences, 2004-2005
- tt. Member, IGB Executive Committee, 2004-2008

- uu. Member, Faculty Search Committee, Stem Cell Biology, Department of Veterinary Biosciences, 2005
- vv. Chair, Stem Cell and Regenerative Biology Committee, Office of the Vice Chancellor for Research, 2005-2006
- ww. Member, *Ad-hoc* Provost's Committee on Current State of Biology Education, 2006
- xx. Chair, Faculty Search Committee, Evolutionary Genomics, Department of Animal Sciences, 2006-2007
- yy. Member, Sponsored Project Administration Advisory Committee, 2006-2008
- zz. Member, Academy for Entrepreneurial Leadership Advisory Board, 2006-present
- aaa. Member Animal Sciences Initiative Team-Priority Areas, 2007
- bbb. Member, ACES Policy Committee, 2007-2009
- ccc. Member, Provost's Committee on Institutional Entrepreneurship at Illinois, 2007-2008; Co-Chair, 2010-2014
- ddd. Member, Animal Sciences Initiative Team on Priority Program Areas, 2007-2008
- eee. Chair, Provost and Vice Chancellor for Research's Implementation Committee for the Division of Biomedical Sciences, 2007-2008
- fff. Member, Graduate College Bioinformatics Steering Committee, 2007-2009
- ggg. Director, Carle-IGB Cell-Based Therapy Facility, 2007-2010
- hhh. Member, MIT-Lemmelson Prize Selection Committee, 2008-present
- iii. Member, Search Committee, Vice Chancellor for Research, 2011-2012
- jjj. Co-Chair, Provost's Entrepreneurship Roundtable, 2011-2014

3. University of Minnesota

- a. Member, Program Committee, Global Event in Biotechnology, 1994-1995; Chair, 1996-1997
- b. Member, College of Biological Sciences Instrumentation Committee, 1995
- c. Member, Search Committee, Executive Director of Minnesota Agricultural Experiment Station, 1995
- d. Member, Quality Reengineering Technical Committee, Office of the Provost, Academic Health Center (50% appointment), 1995
- e. Member, Task Force on Interdisciplinary Programs, Academic Health Center, 1996-1997
- f. Convenor, Biology Reorganization of Genetics, Council of Deans, 1996-1997
- g. Member, Search Committee, Technology Transfer Liaison for the St. Paul Campus, Office of Research and Technology Transfer Administration, 1997
- h. Member, Strategic Facility Plan Steering Committee, Academic Health Center, 1997-1998
- i. Member, Rosemount Experiment Station Task Force, 1998
- j. Member, Biosciences Policy Council, 1998-2000
- k. Member, Molecular and Cellular Biology Technology Facility Planning Committee, 1998-2000
- l. Member, Search Committee, Program Development and Management Director, University College, 1998

4. International/national committees

- a. American Association of Veterinary Medical Colleges (AAVMC)
Elected Secretary, Research Deans and Directors, 1998-99; Chair, Research Deans and Directors, 1999-2000
- b. Biotechnology Industry Organization (BIO)

- Member, Council of Biotechnology Centers, 2000-2001; Council for Biotechnology Information, 2000-2001; Program Committee, 2010
- c. International Society of Animal Genetics (ISAG)
Chair, RFLP Mapping of Swine Major Histocompatibility Complex, 1988-1992; Elected, Gene Mapping Committee (Swine), 1990-1992; Elected Member, Committee on Genetic Regulation of the Immune Response, 1990-1998; Elected Member, SLA Standing Committee, 1990-1998; Organizing Committee, Swine Gene Mapping Workshop I, 1992; Standing Committee, Dog Animal Identification, 1996-1998; Chair, Plenary Session on Marker Assisted Selection, 1998; Executive Committee and Chair, ISAG 2000 Meeting Organizing Committee, 1998-2000; Chair, Domestic Animal Genome Sequencing Committee, 2002-2010
 - d. Midwest Autumn Immunology Council
Member, 1987-present; Site Selection Committee, 1988; Executive Committee; Workshop Coordinator, 1989; Member, 1989-1992; Secretary, 1990; Chair, 1991; Counselor, 1992
 - e. National Agricultural Biotechnology Council
Appointed University of Minnesota Representative, 1994-2001; Appointed University of Illinois Representative, 2002-present
 - f. Society of Leukocyte Biology
Membership Committee, 1991-1993; Chair, 1992
 - g. Society of Toxicology: Immunotoxicology Section
Program Committee, 1989; Awards Committee, 1989-1990; Vice President Elect, 1992; Vice President, 1993; President, 1994; Counselor, 1995
 - h. U.S. Department of Agriculture (USDA): Cooperative Research, Education, and Extension Service (CREES), Representative, Applications of Cellular and Molecular Biology to Animal Science Research (NCR-150), 1987-1992; Advisory Panel, Animal Systems, CRGO/USDA, 1990; Member, National Animal Genetic Resources Committee (Subcommittee, National Animal Genome Research Program), 1990-1994; Appointed, Biotechnology Response Team, Federation of American Societies of Food Animal Sciences, 1991-1994; Organizing Committee, Animal Biotechnology: Technology Transfer and Industrial Needs Symposium (NCR-150), National Livestock and Meat Board, Chicago, IL, May 17-19, 1992; Invited participant, National Animal Genome Research Workshop (CSRS/ARS), St. Louis, MO, June 6-7, 1992 (Chair, Swine Gene Mapping Committee); Representative to European Community Meeting on PiGMap, Copenhagen, Denmark, November 28-29, 1992; Elected Chair, Mapping the Swine Genome (NC-210), 1992-1993; Elected Chair, Animal Genome Technical Committee (NRSP-8), 1993-1994; USDA-ESCOP Agricultural Genomics Committee, 1999-2000
 - i. Co-Chair, Workshop of Swine Gene Mapping in Taiwan, Taiwan Livestock Research Institute, Hsinhua, Taiwan, March 18, 1997
 - j. Co-Chair, International Conference on Animal Biotechnology, Chinese Agricultural University, Beijing Animal Biotechnology Course, June 10-15, 1997
 - k. Co-Chair, Organizing Committee, International Society for Animal Cytogenetics Congress, Minneapolis, MN, June 14-18, 1999
 - l. Chair, Host Committee, International Society for Animal Genetics Congress, Minneapolis, MN, July 21-26, 2000

- m. Member, National Research Council/National Academy of Sciences, Subcommittee on Defining Science-Based Concerns Associated with Products of Biotechnology, 2001-2002
- n. Member, National Research Council/National Academy of Sciences, Steering Committee on Exploring Horizons for Domestic Animal Genomes, 2001-2002
- o. Chair, Steering Committee and Program Committee, Alliance for Animal Genome Research, 2003-2009
- p. Co-Chair, International Swine Genome Sequencing Consortium, 2003-2015

E. Outreach

1. Schook, L.B., T.M. Rogers, and J.R. Niederhuber. "The role of the MLR procedure in organ transplantation." Office of Educational Resources and Research, The University of Michigan. 1982, 20-minute videotape approved for CME credits.
2. Schook, L.B., T.H. Rogers, and J.E. Niederhuber. "A MLR procedure: computer simulation." Office of Educational Resources and Research, University of Michigan. 1982, Computer assisted instructional (AI) program approved for CME credits.
3. Schook, L.B. "A new horizon." 1983, VCU Research in Action Publication.
4. Orndorff, B. and L.B. Schook. "State labs aid probe of diseases." *Richmond Times Dispatch* 17 April 1983.
5. Schook, L.B. "Hybridoma biotechnology: the fusion of immortality and specificity." 1983, VCU Publication. A brochure for the Conference on Industry/University Relationships in Science and Technology.
6. Bond, W. and L.B. Schook. Commentary on MCV Hybridoma Laboratory. Channel 12, Richmond, VA. July 11, 1984. Television.
7. Schook, L.B. "Hybridoma biotechnology: the fusion of immortality and specificity." 1984, VCU Research in Action Publication.
8. Schook, L.B. and P. Schwartz. "Manual for hybridomas and monoclonal antibodies" 1984, 1986, VCU Publications.
9. Schook, L.B. 1985. Immunology Laboratory Handbook. 192 p.
10. Cherry, D. and L.B. Schook. "Search is underway for dental caries vaccine." *Loudoun County News* 25 February 1986.
11. Faculty Advisor, Hoof 'n' Horn Club, University of Illinois, 1987-1989
12. Schook, L.B., H.A. Lewin, and D.G. McLaren. 1989. How genes of the immune system affect disease resistance and production traits. National Pork Producers Council Research Investment Report, pp. 62-64
13. Schook, L.B., H.A. Lewin, D.G. McLaren, M.F. Rothschild, C.M. Warner, and D.A. Hoganson. 1990. Characterization of swine histocompatibility antigens and their association with health and production. National Pork Producers Council Research Investment Report, pp. 35-39
14. Schook, L.B. and A.L. Rayburn. 1991. Animal and plant genomic research. *Illinois Research*, pp. 14-16
15. Schook, L.B., P.A. Clamp, Y.-C. Shia, and H.A. Lewin. 1991. Mapping genes controlling disease resistance in pigs. Minnesota Swine Conference for Veterinarians, pp. 96-104
16. Wilken, T.M., D.G. McLaren, P.J. Dziuk, and L.B. Schook. 1991. Experimental determination of the etiology of maternal effects in swine. National Pork Producers Council Research Investment Report, pp. 25-30

17. Schook, L.B., H.A. Lewin, and M.B. Wheeler. 1992. Mapping major genes for growth and reproductive traits in swine. National Pork Producers Council Research Investment Report, pp. 45-47
18. Schook, L.B. 1995. Mapping the Pig Genome: A Practical Primer. Minnesota Agricultural Experiment Station Publication MR-234, 1995
19. Organizer, Molecular Biology Techniques Workshop, Al Leman Swine Conference, 1997
20. Schook, L.B. Animals by Design: A Primer on the tools of modern biotechnology, Minnesota Agricultural Experiment Station Publication MR-7220, 1998
21. Session Chair, Al Leman Swine Conference, 1998
22. Established Biotechnology Education & Training Initiative, University of Minnesota, 1999 (web-based service)
23. "Minnesota: River and Fields." Series 13 on Agricultural Biotechnology, Minnesota Public Television, 2000

VIII. GRANTS, GIFTS, OR CONTRACTS RECEIVED

A. Medical College of Virginia

1. "Expression of Ia Antigens During *in vitro* Differentiation of Bone Marrow Derived Macrophage" 3/1/82 – 2/28/83. \$3,000. MCV/VCU Cancer Center (IN-105G). Role: PI
2. "Purification of Monoclonal Antibodies for Studying Ia Antigen Expression on Bone Marrow Derived Macrophage." 7/1/82 – 6/30/83. \$5,000. VCU Grants-in-Aid (82/030). Role: PI
3. "Monoclonal Regulatory Mediators from T Cell Hybridomas" 12/1/82 – 11/30/83. \$6,000. A. D. Williams Committee, MCV. Role: PI
4. "Hybridoma Antibodies to Glycoprotein Determinants of Herpes Simplex Virus, Type 2" 1/1/83 – 12/31/83. \$2,800. Horseley Cancer Research Fund. Role: PI
5. "Research Training in Cancer Etiology and Treatment" 9/1/83 – 8/31/88. \$543,582. NIH (T32-CA09210). Role: Co-PI (10% effort)
6. "Toxic Effects of Benzopyrene on Immunocompetent Cells" 5/1/84 – 4/30/87. \$210,617. NIH (ES03366). Role: PI (25% effort)
7. "Immunological Studies with Vascular Endothelial Cells" 7/1/84 – 8/15/85. \$23,305. American Heart Association. Role: PI (25% effort)
8. "Dimethylnitrosamine Effects on Cellular Immunity" 8/1/84 – 7/31/87. \$198,863. NIH (ES03468). Role: PI (30% effort)
9. "Massey Cancer Center Core Support" 12/1/84 – 11/30/89. \$36,645. NIH (P30-CA16059). Shared Resource: Hybridoma Laboratory. Role: Director (15% effort)
10. "Development of a Dental Caries Vaccine" 1/1/85 – 12/31/86. \$108,226. Virginia Center for Innovative Technology (BIO-85-019). Role: PI (10% effort)
11. "Development of Human Monoclonal Antibodies by Immunization *in vitro*" 1/1/86 – 12/31/86. \$5,000. Lim Technology Laboratories, Richmond, VA. Role: PI
12. "Development of Bioadsorptive Antibodies to Mucin" 6/1/86 – 5/30/87. \$8,000. Alcon Laboratories, Fort Worth, TX. Role: PI
13. "Antigen Presenting Cells: Diversity, Differentiation and Regulation" Symposium Support 1/1/87 – 6/30/87. \$5,000. Office of Naval Research. Role: Co-PI (5% effort)
14. "RES Conference: Antigen Presenting Cells" 1/1/87 – 6/30/87. \$5,000. NIH (AI24753). Role: Co-PI (5% effort)

15. "Postdoctoral Training in Cancer Biology" 7/1/87 – 6/30/92. \$1,339,840. NIH. Role: Co-PI (15% effort)
- B. University of Illinois at Urbana-Champaign
1. "Cell and Molecular Biology Training Grant" 7/1/84 – 6/30/89. \$286,872. NIH. Role: Co-PI
 2. "Start-up funds for new initiative in biotechnology" 8/21/86 – 8/20/87. \$25,000. UIUC Biotechnology Center. Role: PI
 3. "Genetic basis of disease" 2/23/87 – 12/31/87. \$15,000. IBM Research Award. Role: PI (5% effort)
 4. "Construction of transgenic mice for studying developmental-specific gene regulation" 4/1/87 – 3/31/88. \$6,396. NIH Biomedical Research Support Grant (RR-7030). Role: PI (5% effort)
 5. "Swine histocompatibility antigens and their association with health and production" 6/1/87 – 5/31/88. \$10,000. National Pork Producers Council. Role: PI (5% Effort)
 6. "Enzymatic and genetic analysis of *Ruminococcus* cellulases" 7/1/87 – 7/30/90. \$250,000. USDA (87-CRCR-35-0505). Role: Co-I (5% effort)
 7. "Molecular analysis of the bovine major histocompatibility complex" 9/1/87 – 8/31/89. \$110,000. USDA (87-CRCR-1-2546). Role: Co-PI (5% effort).
 8. "Dimethylnitrosamine effects on cellular immunity" 9/1/87 – 8/31/92. \$572,659. NIH (ES04348). Role: PI (25% effort)
 9. "The swine histocompatibility complex and its association with health and production" 10/1/87 – 9/30/92. \$75,000. UIUC Department of Animal Sciences (HATCH 35-328). Role: PI (5% Effort)
 10. "Training support for molecular immunology in animal health" 2/15/88. \$500. Animal Health Division, Eli Lilly and Co. Role: PI
 11. "Swine histocompatibility antigens and their association with health and production" 6/1/88 – 5/31/89. \$13,000. National Pork Producers Council. Role: PI (5% effort)
 12. "Experimental determination of the etiology of maternal effects in swine" 7/1/88 – 6/30/89. \$13,000. National Pork Producers Council. Role: Co-PI (5% effort)
 13. "USDA Biotechnology National Needs Training Grant" 7/1/88 – 6/30/91. \$192,000. USDA. Role: Co-PI
 14. "DNA fingerprinting in captive Breeding of eld's deer" 1/1/89 – 12/3/89. \$2,500. National Zoo of the Smithsonian Institute, Washington, D.C. Role: PI
 15. "Establishment of an Embryo Manipulation Laboratory (EML) for the production of transgenic animals" 2/1/89 – 1/31/91. \$100,000. UIUC Biotechnology Center. Role: PI and Director
 16. "Program in Comparative Gene Mapping" 2/1/89 – 1/31/91. \$40,000. University of Illinois Agriculture Experiment Station. Role: PI and Program Director (1% effort)
 17. "Characterization of Purebred Meishan Pigs." 8/1/89 – 7/31/91. \$31,493. Illinois Pork Producers Association. Role: Co-PI
 18. "Mapping and Polymorphism of Bovine Major Histocompatibility Complex Genes" 9/1/89 – 8/31/92. \$325,000. USDA (89-37266-4568). Role: Co-PI (5% effort)
 19. "Fellowship Program in Molecular and Cell Biology of Domestic Animal Production" 9/1/89 – 6/30/94. \$96,000. USDA Biotechnology National Needs (89-38420-4416). Role: Project Director (3% effort)

20. "Mapping Domestic Animal Genomes: Needs and Opportunities" (conference funding) 03/01/90 – 02/28/91. \$15,000. USDA. Role: PI
21. "Mapping Domestic Animal Genomes: Needs and Opportunities" (conference funding) 03/01/90 – 02/28/91. \$5,000. Division of Animal Health, Eli Lilly. Role: PI
22. "Mapping Domestic Animal Genomes: Needs and Opportunities" (conference funding) 03/01/90 – 02/28/91. \$500. National Pork Producers Council. Role: PI
23. "Mapping Domestic Animal Genomes: Needs and Opportunities" (conference funding) 03/01/90 – 02/28/91. \$200. Stormont Laboratories. Role: PI
24. "Prevention of *Salmonella typhimurium* colonization of swine by peptide vaccines" 04/01/90 – 03/31/93. \$75,000. USDA Animal Health Formula Funds (70-0990). Role: Co-PI
25. "Mapping genes for growth and reproductive traits in swine" 07/1/90 – 06/30/91. \$13,500. National Pork Producers Council. Role: PI
26. "Mapping Major Genes for Growth and Reproductive Traits in Swine" 8/1/90 – 7/31/93. \$250,000. USDA Competitive Grants (90-37265-5298). Role: PI (15% effort)
27. "Summer research program for minority undergraduate students" 9/15/90 – 9/30/91. \$45,675. USDA Higher Education Challenge Grants Program. Role: Co-PI
28. "Control of transcription of the gene encoding tumor necrosis factor (TNF) in macrophages" 1991. \$3,200. International Union Against Cancer. Support for sabbatical training of D. V. Kuprash, Engelhardt Inst. of Molecular Biology, USSR. Role: PI
29. "Mapping major genes for growth and reproductive traits in swine" 1991-1992. \$13,000. National Pork Producers Council. Role: PI
30. "Characterization of reproductive performance of purebred Meishan pigs and of 1/2-Chinese Gilts" 1991-1992. \$15,000. Illinois Pork Producers Association. Role: Co-PI
31. "Modification of the TNF alpha gene in swine embryonic stem cells via homologous recombination" 10/1/91 – 9/30/94. \$438,090. Biotechnology Research and Development Corporation. Role: Co-PI (25% effort)
32. "Macrophage Biology" (Gift) 1991. \$20,000. Marion Merrill Dow, Inc.
33. "Dimethylnitrosamine effects on cellular immunity" 9/1/92 – 8/31/97. \$1,094,432. NIH (ES04348). Role: PI (25% effort)
34. "Fellowship Program in Animal Genetics" 9/1/92 – 8/31/97. \$108,000. USDA Animal Biotechnology National Needs. Role: PI and Project Director (3% effort)
35. "PCR-based genotyping of the swine major histocompatibility complex (SLA)" 10/1/92 – 9/30/93. \$60,000. Biotechnology Research and Development Corporation. Role: PI (5% effort)
36. "Host Mechanisms of Resistance and Susceptibility to BLV Infection" 1993-1996. \$240,000. National Institutes of Health. Role: Co-PI (15% effort)

C. University of Minnesota

1. "Dimethylnitrosamine effects on cellular immunity" 9/1/92 – 8/31/97. \$1,094,432. NIH (ES04348). Role: PI (25% effort). Transferred from the University of Illinois at Urbana-Champaign.
2. "Mapping Major Genes for Growth and Reproductive Traits in Swine" 8/1/93 – 7/31/96. \$317,068. USDA Competitive Grants (9301514). Role: PI (20% effort)
3. "Physical Mapping of Swine Genes with Fluorescence *In Situ* Hybridization" 5/1/94 – 4/30/95. \$5,000. Minnesota Pork Producers Association. Role: Co-PI (3% effort)

4. "Active Immunization Using Siderophore Receptor Protein" 8/1/94 – 7/31/96. \$120,000. Midwest Poultry Consortium. Role: PI (5% effort)
5. "Fellowship Program in Animal Biotechnology" 9/1/94 – 8/31/99. \$108,000. USDA Animal Biotechnology National Needs. Role: Co-PI (3% effort)
6. "Identification of genes for swine disease resistance" 5/1/95 – 4/30/96. \$15,000. National Pork Producers Association. Role: PI (5% effort)
7. "Development of Additional Genetic Markers for reproductive QTL in Swine" 5/1/95 – 4/30/96. \$15,000. National Pork Producers Association. Role: PI (5% effort)
8. "Genetic Markers Characterizing Heat-Tolerant Swine Germplasm" 7/1/95 – 6/30/98. \$30,000. USDA-Foreign Agricultural Service. Role: PI (5% effort)
9. "Development of high throughput genetic analysis laboratory" 8/1/95 – 7/31/98. \$220,000. National Science Foundation (BIR/9512424). Role: PI (5% effort)
10. "Partial support of swine chromosome 7 workshop" 9/8/95 – 12/31/95. \$5,000. USDA-ARS. Role: PI
11. "Allerton II: Genetic analysis of economically important traits in livestock" USDA-CSREES. 9/1/96 – 8/31/97. \$5,000. Role: Co-PI
12. "Mapping Major Genes for Growth and Reproductive Traits in Swine" 10/1/96 – 9/30/98. \$282,993. USDA Competitive Grants (9635205). Role: PI (20% effort)
13. "Swine Gene Mapping" 3/1/97 – 7/28/98. \$100,000. Babcock Swine genetics. Role: PI (5% effort)
14. "Development of additional markers for QTL in swine" 7/1/97 – 6/30/98. \$18,000. National Pork Producers Council. Role: Co-PI
15. "Fine mapping of putative QTLs affecting ovulation rate on porcine chromosome 8" 10/1/97 – 9/30/99. \$200,000. USDA-CSRS. Role: Co-PI
16. "Development of an EST and high resolution comprehensive map for swine" 12/01/97 – 11/30/00. \$672,965. Biotechnology Research Development Corporation. Role: Co-PI (5% effort)
17. "Mechanisms for TNF-alpha in Xenobiotic-Induced Liver Injury" 4/1/98 – 3/31/01. \$403,576. NIH. Role: Co-PI (5% effort)
18. "Center for Excellence in DNA-Based Diagnostics" 4/15/98 – 4/14/01. \$343,000. PE AgGen. Role: PI and Director (3% effort)
19. "Gene Expression by PRRSV-Infected Macrophages" 6/1/98 – 5/31/99. \$18,500. National Pork Producers Council. Role: PI (5% effort)
20. "11th North American Colloquium on Domestic Animal Cytogenetics and Gene Mapping" 6/1/98 – 5/31/99. \$4,000. USDA-CSREES. Role: Co-PI (3% effort)
21. "Center for Excellence in XenoDiagnostics" 6/1/98 – 12/31/99. \$410,000. Nexttran, Inc. Role: PI (3% effort)
22. "Development of additional markers for QTL in swine" 7/1/98 – 6/30/99. \$18,500. National Pork Producers Council. Role: PI (3% effort)
23. "Fine Mapping of a QTL Affecting Growth Rate on Swine Chromosome 1" 10/1/98 – 9/30/00. \$168,759. NRICGP-USDA. Role: PI (10% effort)
24. "Genomic Science and Technology in Hepatic Tissue Engineering" 7/1/99 – 6/30/01. \$200,000. University of Minnesota Academic Health Center. Role: Co-PI (3% effort)
25. "27th International Society for Animal Genetics" 10/01/99 – 9/30/00. \$10,000. USDA-CREES. Role: PI (3% effort)

26. "Expression of Individual PERV loci" 7/1/00 – 1/1/02. \$20,000. University of Minnesota Grant-in-Aid. Role: PI (3% effort)

D. University of Illinois at Urbana-Champaign

1. "Cargill Excellence Fellowship" 6/21/01 – 6/20/04. \$150,000. Cargill Corporation. Role: PI (3% effort)
2. "Developmental dynamics of pig intestinal responses to bacterial colonization" 9/1/01 – 8/31/04. \$338,237. USDA NRI Competitive Grant. Role: Co-PI (3% effort)
3. "Agricultural Genome Sciences and Public Policy Training Program" 9/15/01 – 9/14/06. \$2,200,000. National Institute of Food and Agriculture, USDA (AG 2001-52100-11527). Role: PI and Program Director (3% effort)
4. "Microbial-Host Interactions at Mucosal Sites: A Functional Genomics Approach" 10/1/01 – 9/30/07. \$75,000. USDA. Role: PI (3% effort)
5. "Livestock Genome Sequencing Initiative" 1/1/03 – 7/31/12. \$3,644,280. USDA-CREES (AG 2003-34480-13172, AG 2004-34480-14417, AG 2005-34480-15939, AG 2006-34480-17150, AG 2008-34480-19328, AG 2009-34480-19875). Role: Co-Program Director
6. "Canine Nutritional Genomics" 5/1/02 – 10/31/03. \$265,000. AniGenics, Inc. Role: PI (3% effort)
7. "Fingerprinting and End Sequencing BAC clones to contribute to the International effort of building a bovine and porcine physical [BAC] map" 5/31/02 – 5/31/07. \$1,246,046. Agricultural Research Service, USDA (AG 58-5438-2313). Role: Co-PI (3% effort)
8. "GI Epithelial Stem Cells" 7/1/02 – 6/30/03. \$180,000. UIUC Critical Research Initiative. Role: PI (3% effort)
9. "Data Mining for Disease Susceptibility" 8/1/02 – 8/1/03. \$25,000. National Center for Supercomputer Applications Faculty Fellows Program, University of Illinois at Urbana-Champaign. Role: PI (3% effort)
10. "Genomic Discovery" 9/1/02 – 8/31/04. \$50,000. Cargill Corporation
11. "Creation of a transgenic porcine model of A-T" 9/1/02 – 8/31/04. \$185,000. AT Foundation. Role: Co-PI (5% effort)
12. "Somatic Cell Genomics: Integrating QTL Discovery and Validation" 9/15/02 – 9/14/04. \$226,000. USDA (AG 58-5438-2-313). Role: PI (5% effort)
13. "Targeted SNP Analysis of the Porcine Ovulation Rate QTLs" 10/1/03 – 9/30/06. \$247,812. USDA NRI Competitive Grant. Role: Co-PI (3% effort)
14. "Swine in Biomedical Research Conference" 6/1/04 – 5/30/05. \$22,500. National Center for Research Resources, NIH (1-R13-RR-020283-01). Role: PI (3% effort)
15. "Swine in Biomedical Research Conference" 6/1/04 – 5/31/05. \$9,500. USDA (2005-35206-15249). Role: PI (3% effort)
16. "Swine in Biomedical Research" 9/1/04 – 8/31/05. \$3,000. USDA (2004-38831-02193). Role: PI (3% effort)
17. "Defining the nutritional requirements of the developing intestinal ecosystem" 4/1/05 – 3/31/09. \$500,000. Bristol-Myers Squibb Freedom to Discover Nutrition Research Grant. Role: Co-PI (3% effort)
18. "Application of molecular motors for local and high-resolution characterization of single DNA molecules" 7/1/05 – 6/30/07. \$216,000. Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign. Co-PI (3% effort)

19. "Center for Hemostasis Research" 10/1/05 – 9/30/08. \$300,000. Roy J. Carver Charitable Trust. Role: Co-PI (3% effort)
20. "Porcine Genome Sequencing Project" 1/15/06 – 1/14/10. \$10,000,000. USDA (AG 2006-35216-16668). Role: PI (30% effort)
21. "High-Throughput Stem Cell Procurement and Purification for Cell-Based Therapies" 5/21/07 – 05/20/09. \$1,000,000. Illinois Regenerative Medicine Institute, Illinois Department of Public Health (IDPH 2006-05481). Role: PI (20% effort)
22. "Porcine and Bovine Genome Annotation and QTL dissection" 6/1/07 – 9/30/14. \$2,010,767. USDA/ARS (AG 58-5438-7-3171). Role: PI (5% effort)
23. "Swine Genome Sequencing Project" 9/13/07 – 12/31/10. \$975,610. USDA NRI Competitive Grant (AG 58-0208-7-149). Role: PI (3% effort)
24. "Harvesting Genetic Diversity for Disease Resistance" 10/1/07 – 9/30/09. \$7,500. USDA HATCH Grant (ILLU-538-379). Role: PI (3% effort)
25. "High density SNP Discovery Validation and Characterization in Swine" 1/15/08 – 1/14/10. \$998,978. USDA /NRI (2008-35205-18769). Role: PI (5% effort)
26. "Carle/UIUC Stem Cell Facility" 2/1/08 – 6/30/08. \$50,000. Carle Foundation Hospital.
27. "IGB Genomic Fellowship: Cardiovascular Regenerative Medicine" 6/1/08 – 5/31/11. \$226,636. Carle Foundation Hospital. Role: PI (1% effort)
28. "Dermal Thermal Therapy Pilot Study" 7/1/08 – 12/31/09. \$10,993. Acoustic MedSystems, Inc. Role: PI
29. "Technical Testing Agreement" 8/6/08 – 1/1/10. \$53,468. Carle Foundation Hospital. Role: Technical Contact
30. "Micro and Nano-mediated 3D Cardiac Tissue Engineering" 9/1/08 – 8/31/13. \$2,546,000. U.S. Army Medical Research Acquisition Activity. Role: PI (10% effort)
31. "Carle/UIUC Stem Cell Facility" 2/1/09 – 6/30/09. \$50,000. Carle Foundation Hospital.
32. "Nano-sized Cell Guidance System for Ischemic Tissue Repair" 8/1/09 – 7/31/12. \$410,199. NIH (1-R21-HL097314-01). Role: Co-PI (5% effort)
33. "Swine Genome Sequencing Consortium (SGSC): Pig Genome Assembly and Annotation" 9/1/09 – 8/31/10. \$10,000. USDA/ARS (AG 2009-65205-05642). Role: PI (3% effort)
34. "Major Research Instrumentation (MRI): Acquisition of a Molecular Imaging Instrument for Dynamic Material and Biological Systems" 9/1/09 – 8/31/13. \$1,770,910. NSF (CBET 09-22539). Role: Co-PI
35. "Stakeholder Alignment in Socio-Technical Systems" 9/15-09 – 8/31/12. \$352,409. NSF (OCI-0956472). Role: Co-PI (1% effort)
36. "Stem Cell Technologies" 9/30/09 – 9/29/10. \$38,000. Carle Foundation. Role: PI (1% effort)
37. "Latexin: a novel tumor suppressor in hematologic malignancies" 6/1/10 – 4/30/12. \$99,768. American Cancer Society (178898). Role: Co-PI (3% effort)
38. "IGERT: Training the Next Generation of Researchers in Cellular and Molecular Mechanics and BioNanotechnology" 8/1/10 – 7/31/15. \$1,250,000. Role: Participating Faculty
39. "Oncopigs as a Better Model for Human Cancer" 8/5/10 – 5/31/17. \$1,234,332. UIUC sub-award: \$127,639. NIH EUREKA Grant (1-R01-CA-153132-01). Role: PI (1% effort)
40. "NSF Science and Technology Center: Emergent Behaviors of Integrated Cellular Systems" 9/15/10 – 9/14/15. \$25,000,000. NSF (DGE 09-65918)). Role: Participating Faculty

41. "Swine in Biomedical Research Conference 2011, Creating the Building Blocks: Genomics, Transgenesis and Cloning" 4/1/11 – 3/31/12. \$10,000. NIFA USDA (2011-67015-30229). Role: PI (3% effort)
42. "Swine in Biomedical Research Conference 2011, Creating the Building Blocks: Genomics, Transgenesis and Cloning" 4/1/11 – 3/31/12. \$10,000. NIH (1-R13-RR-032267). Role: PI (3% effort)
43. "Photonic Crystal Enhanced Microscopy for Characterization of Cell Attachment" 9/1/11 – 8/31/15. \$450,000. NSF (CBET-1132301). Role: Co-PI (3% effort)
44. "Studies of Porcine Epigenome and Production of Alzheimer's Model Pig" 5/29/12 – 5/28/17. \$450,000. Rural Development Administration, Republic of Korea (538JNU), Korea. Role: PI (1% effort)
45. "Swine in Biomedical Research Conference 2014: Challenges and Opportunities" 3/20/13 – 3/19/14. \$10,000. Office of the Director, NIH (1-R13-OD-018401-01). Role: Co-PI (1% effort)
46. "Thermal ablation of tumors in the onco-pig model" 04/01/16-03/31/18. \$275,000. NIH 1-R21-CA-195433-01A1. Role: Co-PI (1% effort)
47. "Oncopig Cancer Model: Hepatocellular Carcinoma", 08/01/16-07/31/20. \$2,702,778, USAMRMC CA150590.02. Role: PI (15% effort)
48. "Validation of an Advanced Magnetic Resonance Imaging Protocol for Tracking Liver Cancer and Cirrhosis in a Transgenic Porcine Tumorigenic Platform", 12/07/18 – 11/30/19. \$79,950. NIH R03CA235109. Role: Co-I (5%)
49. "Implications of driver mutations for progression of hepatocellular carcinoma", 12/2018-12/2021 \$243,090 NIH R21CA219461. Role: Co-I (5%)
50. "Genetically inducible porcine model of primary and metastatic HCC comorbidity host environments for interventional radiology guided detection and treatment", 08/2016-07/2020, \$2,000,000 DOD CA150590. Role: PI (20%)
51. "Implications of driver mutations for progression of hepatocellular carcinoma", 07-2019-06/2021. \$225,000. NIH R21 CA219461. Role: Co-I (5%)
52. "Validation of an advanced magnetic resonance imaging protocol for tracking liver cancer and cirrhosis in a transgenic porcine tumorigenic platform", 12/2018-12/2020. \$150,000. NIH RO3 CA235109. Role: Co-I

IX. PUBLICATIONS

A. Books and Primers

1. **Schook**, L.B. 1987. *Monoclonal Antibodies: Production, Techniques and Applications*. New York, NY: Marcel Dekker, Inc.
2. **Schook**, L.B. and J.G. Tew. 1987. *Antigen Presenting Cells: Diversity, Differentiation and Regulation* (Progress in Leukocyte Biology Series, Vol. 7). New York, NY: Alan R. Liss Inc.
3. **Schook**, L.B., H.A. Lewin, and D.G. McLaren. 1991. *Gene Mapping: Techniques and Applications*. New York, NY: Marcel Dekker, Inc.
4. **Schook**, L.B. and D.L. Laskin. 1994. *Xenobiotics and Inflammation: Roles of Cytokines and Growth Factors*. Orlando, FL: Academic Press Inc.
5. **Schook**, L.B. 1995. *Mapping the Pig Genome: A Practical Primer*. St. Paul, MN: Minnesota Agricultural Experiment Station

6. **Schook**, L.B. and S.J. Lamont. 1996. *The Major Histocompatibility Complex of Domestic Animals*. Boca Raton, FL: CRC Press
 7. Tumbleson, M. and L.B. **Schook**. 1996. *Swine in Biomedical Research* (Vol. 1-2). New York, NY: Plenum Publishing
 8. **Schook**, L.B. 1998. *Animals by Design: A Primer on the Tools of Modern Biotechnology*. St. Paul, MN: Minnesota Agricultural Experiment Station
 9. Kong, H.A., A.J. Putnam, and L.B. **Schook**. 2012. *Stem Cells and Revascularization Therapies*. Boca Raton, FL: CRC Press
 10. Collares, T., F.K. Seixas, L. Rund and L.B. **Schook**. 2018. Building strategies for porcine cancer models. *Frontiers in Oncology* eBook ISSN 1664-8714 ISBN 978-2-88945-650-5 DOI 10.3389/978-2-88945-650-5
 11. Schachtschneider, K.M., G. Jungersen, L.B. **Schook** and D. Shanmuganayagam. 2019. "Humanized" large animal cancer models: accelerating time and effectiveness of clinical trials. *Frontiers in Oncology* eBook ISSN 1664-8714 ISBN 978-2-88963-249-7 DOI 10.3389/978-2-88963-249-7
- B. Manuscripts (Mendenley h-index of 41 for ORCHIP (<http://orcid.org/0000-0002-6580-8364>))
1. **Schook**, L.B., L. Carrick, Jr., and R.S. Berk. 1976. Experimental pulmonary infection of mice by tracheal intubation of *Pseudomonas aeruginosa*. *Intl. Res. Commun. Med. Sci.* **4**: 401
 2. **Schook**, L.B., L. Carrick, Jr., and R.S. Berk. 1976. Murine gastrointestinal tract as a portal of entry in experimental *Pseudomonas aeruginosa* infections. *Infect. and Immun.* **14**:564-570
 3. **Schook**, L.B., L. Carrick, Jr., and R.S. Berk. 1977. Experimental pulmonary infection of mice by tracheal intubation of *Pseudomonas aeruginosa*: the use of anti-neoplastic agents to overcome natural resistance. *Can. J. Microbiol.* **3**:823-826
 4. **Schook**, L.B. and R.S. Berk. 1979. Nutritional studies with *Pseudomonas aeruginosa* grown on inorganic sulfur sources. *J. Bacteriol.* **133**:1377-1382
 5. **Schook**, L.B. and R.S. Berk. 1979. Partial purification and characterization of thiosulfate oxidase from *Pseudomonas aeruginosa*. *J. Bacteriol.* **140**:306-308
 6. Otz, U., S. Lazary, L.B. **Schook**, and A.L. de Weck. 1980. Characterization of lymphokines from human mononuclear cell cultures. *In*, A.L. de Weck, F. Kristensen, and M. Landy (Eds.), *Biochemical Characterization of Lymphokines* (pp. 15-20). New York, NY: Academic Press
 7. **Schook**, L.B., U. Otz, S. Lazary, A.L. de Weck, and J. Minowada. 1980. Lymphokine activities in supernatants from human lymphoid cell lines. *In*, A.L. de Weck, F. Kristensen, and M. Landy (Eds.), *Biochemical Characterization of Lymphokines* (pp. 67-71). New York, NY: Academic Press
 8. **Schook**, L.B. and J.E. Niederhuber. 1981. Induction of an *in vitro* antibody response using Ia-positive bone marrow derived macrophages. *In*, O. Forster and M. Landy (Eds.), *Heterogeneity of Mononuclear Phagocytes* (pp. 208-213). New York, NY: Academic Press
 9. **Schook**, L.B., U. Otz, S. Lazary, A.L. de Weck, J. Minowada, R. Odavic, E.M. Kniep, and V. Edy. 1981. Lymphokine and monokine activities in supernatants from human lymphoid and myeloid cell lines. *Lymphokines*, **2**:1-19
 10. Wellhausen, S.R., D.L. Boros, L.B. **Schook**, and J.E. Niederhuber. 1981. Fc, C3 receptors and Ia antigens on macrophages isolated from liver granulomas of *Schistosoma mansoni*

- infected mice. *In*, O. Forster and M. Landy (Eds.), *Heterogeneity of Mononuclear Phagocytes* (pp. 173-175). New York, NY: Academic Press
11. Niederhuber, J.E., E. Bingham, and L.B. **Schook**. 1982. Production of a hybridoma T suppressor cell and suppressor factor. *J. Surgery*, **92**:146-152
 12. **Schook**, L.B., E. Bingham, D.H. Gutmann, and J.E. Niederhuber. 1982. Characterization and expression of H-2I region gene products on bone marrow derived macrophages. *Eur. J. Immunol.* **12**:991-997
 13. **Schook**, L.B., D.A. Campbell, and J.E. Niederhuber. 1982. *Ir* gene regulation of T cell proliferation: requirement for Ia and antigen expression on the same accessory cell. *In*, S. Normann and E. Sorkin (Eds.), *Macrophage and Natural Killer Cell: Regulation and Function* (pp. 563-568). New York, NY: Plenum Press
 14. **Schook**, L.B., D.H. Gutmann, and J.E. Niederhuber. 1982. Characterization of bone marrow derived macrophages on Ia-bearing accessory cells. *In*, P. Nieuwenhuis, A.A. Van den Broek and M.G. Hanna, Jr. (Eds), *In vivo Immunology: Histophysiology of the Lymphoid System* (pp. 429-433). New York, NY: Plenum Publishing Corp
 15. **Schook**, L.B., F. Kristensen, U. Otz, S. Lazary, and A.L. de Weck. 1982. Production of human interleukin-2 (TCGF) using serum free culture conditions. *In*, A. Khan and N.O. Hill (Eds), *Human Lymphokines: Biological Immune Response Modifiers* (pp. 135-143). New York, NY: Academic Press
 16. **Schook**, L.B. 1983. Regulation of Ia antigen expression during differentiation of bone marrow derived macrophage. *In*, J.W. Parker and R. O'Brien (Eds.), *Intercellular Communication in Leucocyte Function* (pp. 287-294). New York, NY: John Wiley & Sons
 17. **Schook**, L.B., P.M. Allen, and J.E. Niederhuber. 1983. Bone marrow derived macrophage as accessory cells in antigen-induced T cell proliferation. H-2I region requirements for L-glutamic⁶⁰-L-alanine³⁰-L-tyrosine¹⁰ response. *J. Immunol.* **130**:661-664
 18. **Schook**, L.B., D.H. Gutmann, L.E. Marlin, and J.E. Niederhuber. 1983. Expression of Ia antigens and *Ir* gene functions during differentiation of bone marrow derived macrophage. *In*, C.W. Pierce, S.E. Cullen, J.A. Kapp, B.D. Schwartz, and D.C. Shreffler (Eds.), *Ir Genes* (pp. 287-294). New York, NY: Humana Press
 19. **Schook**, L.B., S.R. Wellhausen, D.L. Boros, and J.E. Niederhuber. 1983. Accessory cell function of liver granuloma macrophages of *S. mansoni*-infected mice. *Infect. and Immun.* **42**:882-886
 20. **Schook**, L.B., D.H. Gutmann, L.E. Marlin, and J.E. Niederhuber. 1984. In vitro derived bone marrow macrophages: expression of Ia antigens during macrophage differentiation. *Transplant.* **37**:585-590
 21. Duke, S.S., L.B. **Schook**, and M.P. Holsapple. 1985. Effects of N-nitrosodiethylamine on tumor susceptibility. *J. Leuk. Biol.* **37**:383-394
 22. Futch, W.S. and L.B. **Schook**. 1985. Dissection of macrophage tumoricidal and protozoacidal activities using T cell hybridomas and recombinant lymphokines. *Infect. and Immun.* **50**:709-715
 23. **Schook**, L.B. and M.G. Edwards. 1985. Characterization of the major histocompatibility complex genes and their products. *Clinical Immunol.* **6**:81-84
 24. Myers, M., J.K. Pullen, and L.B. **Schook**. 1986. Alteration of macrophage differentiation into accessory and effector cells from exposure to dimethylnitrosamine *in vivo*. *Immunopharmacol.* **12**:05-115

25. Pullen, J.K. and L.B. **Schook**. 1986. Bone marrow-derived macrophage expression of exogenous and transfected class II MHC genes during differentiation *in vitro*. *J. Immunol.* **137**:1359-1365
26. **Schook**, L.B., J.K. Pullen, M. Small, and L. Lippert. 1986. Analysis of the human MHC using DNA probes: description and clinical applications. *BioTechniques* **4**:48-154
27. Eustis-Turf, E., J.K. Pullen, M.J. Myers, X.-M. Wang, and L.B. **Schook**. 1987. Regulation of immune-associated genes during macrophage differentiation. *In*, L.B. Schook and J.G. Tew (Eds.), *Antigen Presenting Cells: Diversity, Differentiation, and Regulation* (pp. 169-180). New York, NY: Alan R. Liss Publications Inc.
28. Eustis-Turf, E., X.-M. Wang, and L.B. **Schook**. 1987. Electroporation with bone marrow cells: parameters and applications. *Bio-Radiation*, 1345.
29. Lewin, H.A., T. Nolan, and L.B. **Schook**. 1987. Altered expression of BoLA class II antigens on peripheral blood B lymphocytes from BLV-infected cows with persistent lymphocytosis. *In*, L.B. Schook and J.G. Tew (Eds.), *Antigen Presenting Cells: Diversity, Differentiation and Regulation* (pp. 211-220). New York, NY: Alan R. Liss Publications, Inc.
30. Myers, M., C. Dickens, and L.B. **Schook**. 1987. Alterations of macrophage anti-tumor activity and transferrin receptor expression by exposure to dimethylnitrosamine *in vivo*. *Immunopharmacol.* **13**:195-205.
31. Myers, M. and L.B. **Schook**. 1987. Modification of macrophage differentiation: dimethylnitrosamine induced alteration in the responses towards the regulatory signals controlling myelopoiesis. *Intl. J. Immunopharmacol.* **9**:817-825
32. Myers, M.J., L.B. **Schook**, and P.H. Bick. 1987. Mechanisms of benzo(a)pyrene-induced modulation of antigen presentation. *J. Pharmacol. Expt. Therapeut.* **242**:399-404
33. Pucci, M., F.L. Macrina, E. Eustis-Turf, and L.B. **Schook**. 1987. Use of monoclonal antibodies for screening genomic DNA libraries. *In*, L.B. Schook (Ed.) *Monoclonal Antibodies: Production, Techniques and Applications* (pp. 191-205). New York, NY: Marcel Dekker
34. **Schook**, L.B., N. Wood, and T. Mohanakumar. 1987. Identification of human vascular endothelial cell/ monocyte antigenic system using monoclonal antibodies. *Transplant.* **44**:412-416
35. Shaw, J.M., K.V. Shaw, and L.B. **Schook**. 1987. Drug delivery particles and monoclonal antibodies. *In*, L.B. Schook (Ed.), *Monoclonal Antibodies: Production, Techniques and Applications* (pp. 285-310). New York, NY: Marcel Dekker
36. Shaw, J.M., K.V. Shaw, S. Yanowich, M. Iwanik, W.S. Futch, L.H. Matherly, A. Rosowsky, and L.B. **Schook**. 1987. Delivery of lipophilic drugs using lipoproteins. *Ann. N.Y. Acad. Sci.* **507**:252-271
37. Shaw, J.M., W.S. Futch, and L.B. **Schook**. 1988. Induction of macrophage antitumor activity by acetylated low density lipoprotein containing lipophilic muramyl tripeptide. *Proc. Natl. Acad. Sci. USA* **85**:6112-6116
38. **Schook**, L.B., H.A. Lewin, L. Lippert, and L.M. Fisher. 1988. Current and potential applications of DNA probes in the clinical immunology laboratory. *Clin. Immunol. Newsl.* **9**:91-93. (Republished in Japanese. 1989. *Clin. Immunol. Newsl.* **5**:33-37)
39. **Schook**, L.B., J.K. Pullen, M.J. Myers, E. Eustis-Turf, and X.M. Wang. 1988. Regulation of class II and interleukin-1 gene expression in differentiating macrophages. *In*, C.S. David (Ed.), *H-2 Antigens: Genes, Molecules, Functions* (pp. 283-296). New York, NY: Plenum Publishing Co.

40. Wang, X.M., E.P. Eustis-Turf, and L.B. Schook. 1988. Transfection of L929 cell and bone marrow cells by electroporation. *Chin. J. of Microbiol. and Immunol.* **8**:210-213
41. Wood, N., L.B. **Schook**, E.J. Studer, and T. Mohanakumar. 1988. Biochemical characterization of human vascular endothelial cell-monocyte antigens defined by monoclonal antibodies. *Transplant.* **45**:787-792
42. Myers, M.J., J.K. Pullen, N. Ghildyal, E. Eustis-Turf, and L.B. **Schook**. 1989. Regulation of TNF- α and IL-1 gene expression during macrophage differentiation. *J. Immunol.* **142**:153-160
43. Myers, M.J., W.P. Hanafin, and L.B. **Schook**. 1989. Augmented macrophage PGE₂ production following exposure to dimethylnitrosamine *in vivo*: relevance to suppressed T cell responses. *Immunopharmacol.* **18**:115-124
44. Myers, M.J., A. Witsell, and L.B. **Schook**. 1989. Induction of serum colony stimulating activity (CSA) following dimethylnitrosamine (DMN) exposure: effects on macrophage differentiation. *Immunopharmacol.* **18**:125-134
45. Pullen, J.K., E. Eustis-Turf, M.J. Myers, and L.B. **Schook**. 1989. Regulation of MHC gene expression during the differentiation of bone marrow-derived macrophages. *Cell. Immunol.* **121**:398-413
46. Eustis-Turf, E., X.-M. Wang, and L.B. **Schook**. 1990. Transfer of MHC genes into hematopoietic stem cells by electroporation: a model for monitoring gene expression. *Animal Biotechnol.* **1**:47-60
47. Lewin, H.A., W.B. Wheeler, and L.B. **Schook**. 1990. UFO-PCR: A strategy for linkage mapping in species with underdeveloped genetic maps. *In, Proc. Banbury Conf. on Mapping the Genomes of Agriculturally Important Animals* (pp. 95-102). New York, NY: Cold Spring Harbor Press
48. Lippert, L.E., L.M. Fisher, and L.B. **Schook**. 1990. Relationship of major histocompatibility complex class II genes to inhibitor antibody formation in hemophilia A. *Thrombosis and Hemostasis* **64**:564-568
49. McLaren, D.G., R. Fernando, H.A. Lewin, and L.B. **Schook**. 1990. Integrated strategies and methodologies for the genetic improvement of animals. *J. Dairy Sci.* **73**:2647-2656
50. **Schook**, L.B., J.E. Beever, P.A. Clamp, H.A. Lewin, and D.G. McLaren. 1990. Status Report: Mapping the pig genome. *In, Proc. Banbury Conf. on Mapping the Genomes of Agriculturally Important Animals* (pp. 123-129). New York, NY: Cold Spring Harbor Press
51. Teutsch, M.R., J.E. Beever, J.A. Stewart, L.B. **Schook**, and H.A. Lewin. 1990. Linkage of complement factor B gene to the bovine major histocompatibility complex. *Animal Genetics* **20**:427
52. Teutsch, M.R., J.A. Stewart-Haynes, J.E. Beever, L.B. **Schook**, A. Xu, and H.A. Lewin. 1990. Haplotypes of the BoLA-A, Bf, Cyp21 and DQB loci in Angus cattle. *Animal Biotechnol.* **1**:185-199
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C. Abstracts

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X. RESEARCH, CREATIVE AND OTHER SCHOLARLY ACTIVITIES

A. Book reviews

1. Adolph, K.W. (Ed.). (1990). *Advanced Techniques in Chromosome Research*. New York, NY: Marcel Dekker.
2. (1990). *Antibody Design*. New York, NY: Marcel Dekker.

B. Presentations/invited meetings/seminars

1. "Lymphokine activities in supernatants from human lymphoid cell lines," *2nd International Lymphokine Workshop*, Ermatingen, Switzerland, May 27-31, 1979.

2. "Induction of an *in vitro* antibody response using Ia-positive bone marrow derived macrophages," *International Workshop on the Heterogeneity on Mononuclear Phagocytes*, Baden, Austria, July 15-19, 1980.
3. "Induction of an *in vitro* antibody response using Ia-positive bone marrow derived macrophages," Immunology Division, National Institute of Dental Research, NIH, Bethesda, MD, August 30, 1980.
4. "Characterization of bone marrow derived macrophage as accessory cells," Department of Microbiology and Immunology, McGill University, Montreal, Canada, February 18, 1981
5. "Characterization of bone marrow derived macrophage as accessory cells," Department of Biology, Catholic University, Washington, D.C., April 5, 1981.
6. "Characterization of bone marrow derived macrophage as Ia-bearing accessory cells," 7th *International Conference on Germinal Centers and Lymphoid Tissues in Immune Reactions*, Gronigen, June 15-19, 1981.
7. "Characterization of bone marrow derived macrophage as Ia-bearing accessory cells," Department of Microbiology and Immunology, Medical College of Virginia, Richmond, VA, June 22, 1981.
8. "Characterization of bone marrow derived macrophage as Ia-bearing accessory cells," Department of Immunology and Microbiology, Wayne State School of Medicine, Detroit, MI, November 12, 1981.
9. "I_r gene regulation of T cell proliferation: requirement for Ia and antigen expression on the same accessory cell," *International RES Meeting*, Davos, Switzerland, February 7-12, 1982.
10. "Expression of Ia antigens and I_r gene functions during differentiation of bone marrow derived macrophages," *5th Immune Response Workshop*, St. Louis, MO, August 28-31, 1982.
11. "How macrophage and lymphocytes communicate," A.H. Robins, Co., Richmond, VA, December 1, 1982.
12. "Regulation of Ia antigen expression during *in vitro* differentiation of bone marrow derived macrophage," Symposium on *Macrophage Ontogeny and Functions* at the 15th International Leukocyte Culture Conference, Asilomar, CA, December 5-9, 1982
13. "Cell hybridomas and monoclonal antibodies," Sigma Xi, VCU Chapter, Richmond, VA, February 3, 1983.
14. "Hybridoma technology: the fusion of immortality and specificity," *Conference on Industry/University Relationships in Science and Technology*, Virginia Commonwealth University, Richmond, VA, September 14, 1983.
15. "How macrophage and lymphocyte interactions permit recognition of self and nonself," Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, VA, November 9, 1983.
16. "Recognition of self and nonself: cellular and molecular interactions between macrophage and T-lymphocytes," Department of Physiology and Biophysics, Medical College of Virginia, Richmond, VA, December 8, 1983.
17. "Recent advances on the human major histocompatibility complex," Clinical Immunopathology and Virology Series, Department of Pathology, Medical College of Virginia, Richmond, VA, December 14, 1983.
18. "Introduction to hybridoma technology," Workshop on Hybridomas and Monoclonal Antibodies, Medical College of Virginia and Massey Cancer Center, Richmond, VA, April 6, 1984.

19. "Serum free media and *in vitro* immunizations," Workshop on Hybridomas and Monoclonal Antibodies, Medical College of Virginia and Massey Cancer Center, Richmond, VA, April 6, 1984.
20. "T cell hybridomas," Workshop on Hybridomas and Monoclonal Antibodies, Medical College of Virginia and Massey Center, Richmond, VA, April 7, 1984.
21. "The immune response to cancer," The American Cancer Society (Virginia Branch), Visiting Scientist, Department of Biology, James Madison University, Harrisonburg, VA, October 8, 1984.
22. "Monoclonal T cell lymphokines and their use," Science Attachés Program, American Association for the Advancement of Sciences and the American Society for Microbiology, Washington, D.C., October 23, 1984.
23. "Studies on the human MHC using DNA probes with clinical implications," Symposium on *Perspectives in Medical Laboratory Immunology* at the American Society for Microbiology Annual Meeting, Las Vegas, NV, March 4, 1985.
24. "Regulation of macrophage differentiation and activation into accessory or effector cells," Department of Microbiology and Immunology, Medical College of Virginia, Richmond, VA, April 10, 1985.
25. "Regulation of macrophage differentiation into accessory or effector cells," Department of Medical Microbiology, University of Wisconsin, Madison, WI, April 18, 1985.
26. "Tumor immunology," The American Cancer Society (Virginia Branch) Visiting Scientist, Department of Biology, James Madison University, Harrisonburg, VA, October 14, 1985.
27. "Immunological studies with vascular endothelial cells," Virginia Heart Institute, Richmond, VA, December 2, 1985.
28. "Introduction to hybridoma technology," Workshop on Hybridomas and Monoclonal Antibodies, Medical College of Virginia and Massey Cancer Center, Richmond, VA, March 21, 1986.
29. "Strategies for the genetic manipulation of immune responsiveness," Department of Animal Sciences, University of Illinois, Urbana, IL, April 2, 1986.
30. "Strategies for genetic manipulation of immune responsiveness," Department of Microbiology, Medical College of Wisconsin, Milwaukee, WI, April 28, 1986.
31. "Analysis of the human major histocompatibility complex using DNA probes: description and clinical applications," Department of Pathology, Loyola University, Stritch College of Medicine, Maywood, IL, April 30, 1986.
32. "Expression of endogenous and transfected class II gene products during *in vitro* differentiation of bone marrow derived macrophage," *6th Immune Response Workshop*, Oxford, England, October 21-25, 1986.
33. "Bone marrow derived macrophages: model for tissue and differentiation specific regulation," International Minerals and Chemical Corp., Northbrook, IL, July 8, 1987.
34. "Regulation of class MHC gene expression during macrophage differentiation," RES Symposium on *Antigen Presenting Cells: Diversity, Differentiation and Regulation*, Richmond, VA, March 28, 1987.
35. "Current and potential applications of gene probes in the clinical immunology laboratory," Symposium on *New Technologies in the Clinical Laboratory* at the 5th Annual Medical Laboratory Immunology Meeting, Williamsburg, VA, May 3-6, 1987.

36. "Regulation of MHC and interleukin-1 gene transcription in differentiating macrophage," Symposium on *H-2 gene complex, Genes, Molecules and Functions*, Bar Harbor, ME, June 5-9, 1987.
37. "Induction of macrophage mediators of inflammation," Alcon Laboratories, Fort Worth, TX, February 17, 1988.
38. "Alterations in macrophage differentiation and activation after exposure to dimethylnitrosamine," Symposium on *Specific Mechanisms of Immunotoxicity: Chemical Alteration of Cytokine Activity* at the Society of Toxicology, Dallas, TX, February 18, 1988.
39. "Bone marrow derived macrophages: model for tissue and differentiation specific regulation," Department of Veterinary Pathobiology, University of Illinois, College of Veterinary Medicine, Urbana, IL, March 16, 1988.
40. "Methotrexate (MTX) selection of transfectants following electroporation of bone marrow with MHC class II and mutant DHFR genes," Minisymposium on *Regulation of MHC Genes* at the FASEB Annual Meeting, Las Vegas, NV, May 5, 1988.
41. "Bone marrow derived macrophage: a model for lymphokine and genetic manipulation of the immune response," Department of Animal Sciences, Cook College, Rutgers University, New Brunswick, NJ, May 27, 1988.
42. "Bone marrow derived macrophage: a model for lymphokine and genetic manipulation of the immune response," Institute of Clinical Immunology, University of Berne, Switzerland, July 11, 1988.
43. "Oncogene and immune-associated gene expression during CSF-1 and GM-CSF induced macrophage differentiation," Center for Agricultural Molecular Biology, Rutgers University, New Brunswick, NJ, August 31, 1988.
44. "Can macrophage heterogeneity be resolved by molecular phenotyping of proto-oncogene and immune system gene expression," Department of Immunology and Microbiology, Wayne State School of Medicine, Detroit, MI, November 11, 1988.
45. "Strategies for mapping disease related genes in domestic animals," Eli Lilly Laboratories, Greenfield, IN, January 19, 1989.
46. "Dissection of macrophage differentiation and activation: lessons from immunotoxicology," Department of Pharmacology and Toxicology, University of Indiana Medical School, Indianapolis, IN, January 20, 1989.
47. "Macrophage Function," Center for Biochemical and Biophysical Studies, Northern Illinois University, DeKalb, IL, March 10, 1989.
48. "Strategies and Methodologies for the Genetic Improvement of Animals," Symposium on *The Role of Animal Breeding in an Age of Molecular and Zygotic Manipulation*, Joint meeting of the American Dairy Science Association and American Society of Animal Science, Lexington, KY, August 2, 1989.
49. "MHC and cytokine gene expression during macrophage differentiation: what effect do hematopoietic growth factors have on macrophage responses to other modifiers?," Biological Response Modifiers Program, National Cancer Institute, Frederick, MD, August 25, 1989.
50. "Dissection of the immune response: from test tube to transgenic animal," Genetic Engineering Seminar, Department of Agronomy, University of Illinois, Urbana, IL, December 4, 1989.

51. "Status of the porcine gene map," Banbury Center Conference on *Mapping the Genomes of Agriculturally Important Animals*, Cold Spring Harbor Laboratory, Long Island, NY, February 25-28, 1990.
52. "Mechanisms for alteration of macrophage differentiation and activation following chemically-induced toxicity," Immunotoxicology Specialty Section Symposium on *Macrophage-Xenobiotic Interaction: Modulation of Toxicity and Macrophage Functions*, Society of Toxicology Meeting, Miami Beach, FL, February 14, 1990.
53. "Oncogenes," Grand Rounds Presentation, Interdisciplinary Conference, Department of Internal Medicine, Southern Illinois University School of Medicine, Springfield, IL, March 13, 1990.
54. "Program for the genetic manipulation of animal production (GENE MAP)," National Livestock and Meat Board, Chicago, IL, April 17, 1990.
55. "Development of the immune system in the neonate," Biology of the Neonate Seminar Program, Department of Animal Sciences, University of Illinois, Urbana, IL, April 24, 1990.
56. "Understanding the genetics of disease resistance in swine: lessons from mice and man," Department of Animal Sciences, Purdue University, West Lafayette, IN, April 27, 1990.
57. "Understanding the genetics of disease resistance in swine: lessons from mice and man," Department of Animal Sciences, Texas A&M University, College Station, TX, May 21, 1990.
58. "Animal biotechnology," California Beef Council, Pomo, CA, June 3, 1990.
59. "Status of the swine gene map" International Animal Genetics Meeting, East Lansing, MI, August 26, 1990.
60. "Animal biotechnology: a trojan horse or silk-from-a-sow's-ear?," Chicago Farmers Club, Chicago, IL, November 5, 1990.
61. "Animal biotechnology: applications, issues and regulation"; "Gene mapping: tools and technology"; "Gene mapping: programs and implications for animal production, disease resistance"; "Monoclonal antibodies: production, purification and uses"; "Macrophage biology: lessons for cell differentiation and gene regulation"; "Transgenic animals: the new harvest of genetically engineered species," National Dairy Research Institute, Karnal, India, January 18-28, 1991.
62. "Monoclonal antibodies: production, purification and uses," Indian Institute of Industrial Microbiology and Technology, Chandigarh, India, January 23, 1991.
63. "Animal biotechnology," Illinois Farm Bureau, Urbana, IL, April 5, 1991.
64. "Expression of cytokine genes during macrophage differentiation and activation" and "Mapping genes associated with swine growth, development and disease resistance," Animal Biotechnology Seminar Program, Departments of Veterinary Pathobiology and Animal Science, University of Minnesota, St. Paul, MN, April 16-17, 1991.
65. "Mapping genes controlling disease resistance in pigs," *Minnesota Swine Conference for Veterinarians*, University of Minnesota, St. Paul, MN, September 16, 1991.
66. "Resolving macrophage heterogeneity by molecular phenotyping," Department of Microbiology, Molecular Genetics and Immunology, University of Kansas Medical Center, Kansas City, KS, October 2, 1991.
67. "What effect do hematopoietic growth factors have on macrophage activation?," Marion Merrell Dow, Inc., Kansas City, MO, October 3, 1991.
68. "The role of TNF α as an autocrine growth regulator during macrophage differentiation," The Ludwig Institute for Cancer Research, Lausanne, Switzerland, December 9, 1991.

69. "Resolving macrophage heterogeneity by molecular phenotyping: what effects do hematopoietic growth factors have on macrophage activation?," Field of Immunology Seminar Series, Cornell University, Ithaca, NY, January 24, 1992.
70. "The swine gene mapping project: mapping genes for growth, disease and reproduction," Illinois Pork Conference/Trade Show, Peoria, IL, February 7, 1992.
71. "Molecular characterization of the swine major histocompatibility complex," American Cyanamid Co., Princeton, NJ, March 17, 1992
72. "Differential responses of CSF-1- and GM-CSF-derived macrophages to TNF α suggests alternate signalling pathways during macrophage differentiation," Minisymposium, FASEB, Anaheim, CA, April 9, 1992.
73. "The role of TNF α as an autocrine growth regulator during macrophage differentiation," Department of Molecular Microbiology and Immunology, University of Missouri School of Medicine, Columbia, MO, April 22, 1992.
74. "Differential responses of CSF-1- and GM-CSF-derived macrophages to TNF α suggests alternate signalling pathways during macrophage differentiation," *4th International Congress of Tumor Necrosis Factor and Related Cytokines*, Veldhoven, The Netherlands, May 2-6, 1992.
75. "Resolving macrophage heterogeneity by molecular phenotyping: what effects do hematopoietic growth factors have on macrophage activation?," Department of Microbiology, Ohio State University of Medicine, Columbus, OH, May 12, 1992.
76. "Modulating immune responses: macrophages, genes and diseases," Department of Microbiology, Immunology and Preventive Medicine, Iowa State University, Ames, IA, June 9, 1992.
77. "Mapping disease resistance genes in swine," Symposium on *Genetic Regulation of the Immune Response*, Meeting of the International Society of Animal Genetics, Interlaken, Switzerland, August 4, 1992.
78. "PCR-based genotyping of the swine major histocompatibility complex," Sobrino Laboratories, Barcelona, Spain, August 24, 1992.
79. "Mapping genes for growth in swine," Pork Industry Conference, Champaign, IL, November 22, 1992.
80. "The U.S. swine gene mapping program," *3rd European Commission PiGMap Conference*, Copenhagen, Denmark, November 29, 1992.
81. "The role of pro-inflammatory cytokines in DMN-induced immunotoxicity," Institute for Toxicology, University of Zürich, Switzerland, February 2, 1993.
82. "Cytokine regulation of TNF α expression: lesions from mutant mice," Ludwig Cancer Institute, Lausanne, Switzerland, April 30, 1993.
83. "Role of TNF α in macrophage differentiation and activation," Institute of Clinical Immunology, University of Berne, Switzerland, May 25, 1993.
84. "PCR-based genotyping of the swine major histocompatibility complex (MHC) and genes controlling natural immunity," Pig Improvement Co., Minneapolis, MN, August 24, 1993.
85. "PCR-based genotyping of the swine major histocompatibility complex (SLA)," Biotechnology Research Development Co., Ames, IA, August 26, 1993.
86. "U.S. swine genome project," *Leman Swine Conference*, St. Paul, MN, September 13, 1993.

87. "Differential responses to TNF- α by functionally heterogeneous macrophages," Lepetit Research Center, Como, Italy, September 27, 1993.
88. "Recent developments in animal biotechnology," National Dairy Research Institute, Karnal, India, October 26, 1993.
89. "Gene markers and genome mapping in livestock," National Dairy Research Institute, Karnal, India, October 28, 1993.
90. "Molecular characterization of macrophage heterogeneity: role of TNF α in differentiation and activation," Department of Immunology and Microbiology, Wayne State School of Medicine, Detroit, MI, February 1, 1994.
91. "Mapping the swine genome: lessons from mice and man," *International Conference on Comparative Gene Mapping*, Oslo, Norway, February 8, 1994.
92. "Molecular characterization of macrophage heterogeneity: role of TNF α in differentiation and activation," Microbiology, Pathology, and Laboratory Medicine Seminar Program, University of Minnesota, Minneapolis, MN, February 28, 1994.
93. "The swine gene map: an update," *International Symposium on Swine Chromosome 6*, Minnesuing Acres, WI, September 21, 1994.
94. "Molecular characterization of the porcine major histocompatibility complex," Department of Pathology, University of Oklahoma Medical Center, Oklahoma City, OK, September 30, 1994.
95. "The role of major histocompatibility antigens in disease," Psychoneuroimmunology and Addiction Seminar Program, University of Minnesota, Minneapolis, MN, December 16, 1994.
96. "The swine genome project," Department of Genetics and Cell Biology, University of Minnesota, St. Paul, MN, February 2, 1995.
97. "The swine genome project," Department of Animal Science, University of Minnesota, St. Paul, MN, May 8, 1995.
98. "Introduction to gene mapping: what, where and how?"; "Swine gene mapping efforts: status and future directions"; "Genetics of resistance to infectious diseases in swine," International Course on *Analysis of Genomes and Genes: A Step Towards Molecular Animal Breeding*, Beijing Agricultural University, Beijing, PRC, June 12-15, 1995.
99. "Genetic biotechnologies: research developments," *Leman Swine Conference*, St. Paul, MN, September 18, 1995.
100. "Comparative mapping in swine: genetic models for cancer biology and disease resistance," *Human Genome Comparative Mapping Workshop*, Fraser Island, Australia, December 4, 1995.
101. "Mapping quantitative traits in swine: the Minnesota project," CSIRO, Brisbane, Australia, December 6, 1995.
102. "New wave diets: from designer genes to leaner meats," American Association for the Advancement of Science Symposium on *Engineering Functionality into Foods: Benefits for the Consumer*, Baltimore, MD, February 13, 1996.
103. "The role of tumor necrosis factor in macrophage biology: use of receptor knockouts to elucidate," Department of Veterinary Sciences, North Dakota State University, Fargo, ND, April 26, 1996.
104. "Mapping the pig genome: applications for health and production," Plenary Speaker, *International Veterinary Pig Society International Symposium*, Bologna, Italy, July 8, 1996.

105. "The why of reengineering in the academic health center", *21st Annual Conference of North American Veterinary College Administrators*, Minneapolis, MN, September 30, 1996.
106. "Experimental immunoparasitology," Department of Biology, Albion College, Albion, MI, October 18, 1996.
107. "Xenobiotic-induced inflammation: dissecting roles of TNF in DMN-induced hepatotoxicity using TNF receptor knockout mice," Field of Immunology Seminar Series, Cornell University, Ithaca, NY, November 1, 1996.
108. "Mapping the swine genome: status report" and "Integrative genomics: enhanced production and disease resistance through DNA-based technologies," United Nations Development Program and the China International Culture Exchange Center for the China Agricultural University, November 14-16, 1996.
109. "Integrative genomics: linking farms, clinics, and labs through DNA-based technologies," *The Genetic Harvest: Seminar on Automated DNA Analysis for Plants and Animals*, Sponsored by Perkin-Elmer Applied Biosystems and the Bio-Technology Program at the University of California at Davis, Davis, CA, November, 21, 1996.
110. "The science behind biotechnologies impacting the swine industry," *28th Annual Meeting of the American Association of Swine Practitioners*, Quebec City, Quebec, Canada, March 2, 1997.
111. "Enhancement of animal health and production through marker-assisted selection," Cambridge Healthtech Institute program on *Impact of Molecular Biology on Animal Health and Production Research*, Baltimore, MD, March 10, 1997.
112. "Application, current status and perspectives in gene mapping," Keynote Speaker, *Workshop of Swine Gene Mapping*, Taiwan Livestock Research Institute, Hsinhua, Taiwan, March 18, 1997.
113. "Mapping quantitative trait loci for growth, carcass and reproductive traits in a divergent pig cross," Society for Techno-innovation of Agriculture, Forestry and Fisheries, Tsukuba, Japan, March 20, 1997.
114. "Moving to commercialization: transgenic pigs and food production," *Symposium on Transgenic Animals and Food Production*, Royal Swedish Academy of Agriculture and Forestry, Stockholm, Sweden, May 21-23, 1997.
115. "Enhancement of animal health and production through marker-assisted selection," *International Conference on Animal Biotechnology*, Chinese Agricultural University, Beijing Animal Biotechnology Course, Beijing, P.R. China, June 10-15, 1997.
116. "Introduction to DNA-based diagnostics," *Leman Swine Conference*, Minneapolis, MN, September 20, 1997.
117. "Mapping QTL for growth in pigs," INRA- Jouy-en-Josas, France, December 5, 1997.
118. "Animal biotechnology," *MVAIA Agricultural Technology Conference*, St. Cloud, MN, January 23, 1998.
119. "Role of cytokines in xenobiotic-induced inflammation," Continuing Education Program, Society of Toxicology, Seattle, WA, March 2, 1998.
120. "TNF- α -mediated immunotoxicology: differential signaling delineated through TNF receptor (TNFR) knockout (KO) mice," Symposium presentation at *Society of Toxicology Annual Meeting*, Seattle, WA, March 3, 1998.
121. "Vision for veterinary biomedical research," Minnesota Industrial and Public Veterinarians, Minneapolis, MN, April 15, 1998.

122. "Building a better hog: a genetic map," Biological Technology Processing Institute, University of Minnesota, St. Paul, MN, April 16, 1998.
123. "Classical improvement and molecular genetics in animal production," Invited speaker, *8th World Congress on Animal Production*, Seoul, Korea, June 28-July 4, 1998.
124. "Integrative genomics: linking animal production through DNA-based approaches," Invited speaker, *18th International Congress of Genetics*, Beijing, P.R. China, August 10-15, 1998.
125. "Utilization of differential display PCR to identify intracellular immune response ESTs," *Immune Response Symposium*, International Society of Animal Genetics, Auckland, New Zealand, August 10, 1998.
126. "Bio-informatics: status report and future needs," *EC-USA Task Force on Biotechnology Research: Farm Animal Workshop*, Brussels, Belgium, September 15, 1998.
127. "Win-win research partnerships," *7th Annual Meeting and Symposium of the Minnesota Biotechnology Association*, Minneapolis, MN, October 22, 1998.
128. "Been there, done that: an NRI perspective from an applicant and a reviewer," CSREES Grant Writing Program, Kansas City, MO, October 4, 1998.
129. "The swine histocompatibility complex: lessons for health and biomedical research," University of Berne, Veterinary Medicine Faculty Symposium Honoring Professor Sandor Lazary, Bern, Switzerland, January 28, 1999.
130. "Mapping QTL in swine using a radiation hybrid panel," National Institute of Animal Industry and STAFF Institute, University of Tsukuba, Tsukuba, Japan, February 19, 1999.
131. "Integrating swine and human genomics: implications for biomedical research and agriculture," *International Program on Agricultural Genomics: New Technologies, Functions and Advances*, San Diego, CA, June 24-15, 1999.
132. "Classical improvement and molecular genetics in swine production: from marker to market," *5th Annual Symposium on Animal Breeding and Genetics*, University of Tokyo, Tokyo, Japan, November 8, 1999.
133. "Xeno-diagnostics: ensuring pathogen-free cells, tissues, and organs from non-human animal sources," *Minnesota Biotechnology Association Annual Meeting*, Minneapolis, MN, November 16, 1999.
134. "Future production issues for animal agriculture," *National Program Workshop on Animal Genomes, Germplasm, Reproduction and Development, and Animal Production Systems*, Agricultural Research Service, USDA, College Park, MD, February 1, 2000.
135. "Genetic strategies for integrative animal biology," Department of Animal Sciences, University of Illinois, Urbana, IL, May 15, 2000.
136. "Integrating swine and human genomics: implications for biomedical research and agriculture," *Animal Genomics Symposium*, North Carolina State University, Raleigh, NC, August 17, 2000.
137. "Graduate education and research training in the new era of veterinary medicine: needs and opportunities," *11th Congress of the Federation of Asian Veterinary Associations*, Taipei, Taiwan, November 27, 2000.
138. "Xenozoonosis: impact on potential use of animal tissues and organs in xenotransplantation," *11th Congress of the Federation of Asian Veterinary Associations*, Taipei, Taiwan, November 28, 2000.
139. "PGI: Porcine Genome Initiative," Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Illinois, Urbana, IL, April 4, 2001.

140. "Harvesting the genomic promise," Gamma Sigma Delta Fellows Meeting, September 2, 2001.
141. "Integrating nutritional health through genomics," Nutritional Sciences Program, University of Illinois, Urbana, IL, March 11, 2002.
142. "Genetics determinants of infectious disease susceptibility," UIC/UIUC Symposium on Bioinformatics in Medicine, Chicago, IL, April 13, 2002.
143. "Nearterm applications of animal genomics," *Biotechnology Industry Organization (BIO) Annual Meeting*, Toronto, Canada, June 10, 2002.
144. "Beyond livestock genomics: a roadmap for harvesting the promise," USDA Workshop, University of Illinois, Urbana, IL, July 9, 2002.
145. "Can SLA-1, SLA-2 and SLA-3 loci and alleles be distinguished and targeted by PCR-based genomic sequencing?," *International Society of Animal Genetics Annual Meeting*, Goettingen, Germany, August 12, 2002.
146. "Reproductive cloning of domesticated animals or Old McClonal's farm," *Society of Toxicology (Midwestern Branch) Annual Meeting*, Chicago, IL, November 6, 2002.
147. "Future of Agriculture," Symposium honoring Don Holt, University of Illinois, Urbana, IL, November 15, 2002.
148. "Animal biotechnology," American Commodity Council, Washington, D.C., November 19, 2002.
149. "The swine genome initiative: a blueprint for harvesting the genomic promise," Korean National Livestock Research Institute, Suwon, South Korea, February 5, 2003.
150. "The swine genome initiative: a blueprint for biomedical research," Korean National Institutes of Health, Seoul, South Korea, February 7, 2003.
151. "Biotech promise and solutions," National Pork Producers Council, St. Louis, MO, February 13, 2003.
152. "Genomics: the rosetta stone of life," United States Agricultural Information Network, Champaign, IL April 25, 2003.
153. "Harvesting the genomic promise: recombineering sequences for phenotypes," Commonwealth Scientific and Industrial Research Organization, *Horizons in Livestock Sciences Conference*, Gold Coast, Queensland, Australia, May 26, 2003.
154. "Bovine genomic sequencing initiative cattle-izing the human genome: convergence of agricultural and biomedical research," Genome Canada, Montreal, Canada, July 7, 2003.
155. "Applied genomics for pig health improvement," *Leman Swine Conference*, St. Paul, MN, September 14, 2003.
156. "Sequencing the swine genome: building the infrastructure, defining the deliverables, and securing the resources," INRA, Jouy-en-Josas, September 22, 2003.
157. "Harvesting the genomic promise: recombineering sequences for phenotypes," Invited speaker, *Plant and Animal Genome XI Conference*, San Diego, CA, January 11, 2004.
158. "Towards a sequence of the swine genome: building the infrastructure, defining the deliverables, and securing the resources," *Plant and Animal Genome XI Conference*, San Diego, CA, January 11, 2004.
159. "Sequencing the swine genome: who, what, when and where?," National Pork Board, Des Moines, IA, May 19, 2004.

160. "Swine genome sequencing consortium: international perspectives and timelines," Wellcome Trust Sanger Institute, Cambridgeshire, United Kingdom, June 28, 2004.
161. "Comparative gene mapping: pig-human lessons," *29th International Conference on Animal Genetics*, Tokyo, Japan, September 13, 2004.
162. "Creating the ultimate maps: genomic sequencing of domesticated animals," Plenary speaker, *29th International Conference on Animal Genetics*, Tokyo, Japan, September 13, 2004.
163. "Domesticated animal genome sequencing," *29th International Conference on Animal Genetics*, Tokyo, Japan, September 13, 2004.
164. "Harvesting the swine genome: a roadmap for quantitative trait loci (QTL) analysis," Symposium speaker, International Society for Animal Genetics Satellite Meeting with the Japanese Livestock Association, Tokyo, Japan, September 16, 2004.
165. "Swine genomics: a status report," USDA Animal Genomics Workshop, Washington, D.C., September 22, 2004.
166. "Animal genomics resources in the post-genomic sequencing world," Invited speaker, *9th Annual ADSA Discovery Conference on Genetic Resources*, Wyoming, WY, November 4, 2004.
167. "The swine genome sequencing project: building blocks for health and meat production," Taiwan Pork Producers, *Swine Genomics Symposium*, Taiwan Livestock Research Institute, Xinhua, Tainan, Taiwan, November 16, 2004.
168. "Swine genome sequencing consortium," *Plant and Animal Genome XIII Conference*, San Diego, CA, January 15, 2005.
169. "Defining the promise of the pig model," Keynote speaker, *Swine in Biomedical Research Conference*, Chicago, IL, January 27, 2005.
170. "Sequence-based swine model building: harvesting the genomic promise for phenotypes," *Swine in Biomedical Research Conference*, Chicago, IL, January 29, 2005.
171. "Functional genomics for farm animals," *American Association for the Advancement of Science Annual Meeting*, Washington, DC, February 18, 2005.
172. "Canine nutritional model: influence of age, diet, and genetics on animal health and well-being," Michigan State University, East Lansing, MI, May 16, 2005.
173. "A case study for developing a genome sequencing project: the swine genome sequencing initiative," *Plant and Animal Genome XIV Conference*, San Diego, CA, January 14, 2006.
174. "Swine genome sequencing consortium 2005 achievements," *Plant and Animal Genome XIV Conference*, San Diego, CA, January 15, 2006.
175. "Genome assembly and SNP discovery," *Euribid Annual Genetics Meeting*, Guelph, Ontario, April 26, 2006.
176. "A genome positioning system (GPS) for navigating biological diversity" Philip Maxwell Family Keynote Address, Purdue University, May 19, 2006.
177. "The porcine genome initiative: implications for digestive physiology," Plenary speaker, *10th International Symposium on Digestive Physiology in Pigs*, Vejle, Denmark, May 25, 2006.
178. "Catalyzing the translation of discovery into clinical applications: an inter-disciplinary roadmap," Center for Comparative Medicine and Translational Research, College of Veterinary Medicine, North Carolina State University, Raleigh, NC, July 26, 2006.

179. "The swine genome project: a genome positioning system (GPS) for navigating phenotypic diversity and the evolution of the pig (*sus scrofa*)," *Plant and Animal Genome XV Conference*, San Diego, CA, January 13, 2007.
180. "SGSC workshop: the porcine genome sequencing project," *Plant and Animal Genome XV Conference*, San Diego, CA, January 13, 2007.
181. "The swine genome project: a genome positioning system (GPS) for navigating biological diversity," Parco Tecnologico Padano, Italy, February 1, 2007.
182. "The swine genome project: providing the genomic building blocks for swine in biomedical research," Department of Surgery, Indiana University – Purdue University, Indianapolis, IN, February 9, 2007.
183. "Defining product opportunities, milestones and timelines for animal genomics markets," *Improving Animal Reproduction, Health and Nutritional Through Genomics Conference*, St. Hyacinthe, Quebec, Canada, February 15, 2007.
184. "Regenerative biology and tissue engineering: emerging technology and clinical applications," Illinois Biotechnology Association, *IndEx Conference on Innovation to Commercialization*, Chicago, IL, February 22, 2007.
185. "Case study: creating value in the life sciences," Council of Graduate Schools, Washington, DC, March 9, 2007.
186. "Genetics and emerging perspectives on pig breeding for disease resistance," Plenary speaker, *Impact of Molecular Genetics in Pig Production*, Rassegna Suinicola Internazionale, Reggio Emilia, Italy, April 19, 2007.
187. "DNA-based animal models: creating the appropriate clinical phenotypic model," Plenary speaker, *Genomics in Agricultural Research Conference*, Purdue University, West Lafayette, IN, September 11, 2007.
188. "DNA-based animal models of human disease: from genotype to phenotype," Invited speaker, *International Symposium on Animal Genomics for Animal Health*, OIE World Organization for Animal Health, Paris, France, October 23, 2007.
189. "Development of a porcine autologous mesenchymal stem cell cardiovascular regeneration model," Feinberg Cardiovascular Research Institute, Northwestern University Feinberg School of Medicine, Evanston, IL, January 10, 2008.
190. "The swine genome project consortium," *Plant and Animal Genome XVI Conference*, San Diego, CA, January 13, 2008.
191. "Sequencing of the pig genome: status and where do we go from here?," Plenary speaker, *Conference on Swine in Biomedical Research*, San Diego, CA, April 2, 2008.
192. "Large animal models for human disease," Plenary speaker, *32nd Conference of the International Society for Animal Genetics*, Amsterdam, The Netherlands, July, 22, 2008.
193. "Providing a malleable, genetically defined cancer model: a porcine solution," James Graham Brown Cancer Center, Louisville, KY, August 7, 2008.
194. "Towards a genomic platform for analysis of wild boar and suiforme diversity and evolution," Invited Speaker and Session Chair, *7th International Symposium on Wild Boar (Sus Scrofa) and on Sub-Order Suiformes*, Sopron, Hungary, August 29, 2008.
195. "Sequencing of the pig genome: status and where do we go from here?," Animal Genomics Department, College of Veterinary Medicine, University of Barcelona, Spain, September 1, 2008.

196. "Animal genomics markets: security, health and performance," Plenary speaker, *International Veterinary Business Conference (InnoVet08)*, Saint-Hyacinthe, Canada, September 23, 2008.
197. "Sequencing of the pig genome: 2009 status report," *Plant and Animal Genome XVII Conference*, San Diego, CA, January 11, 2009.
198. "Protecting and managing animal genetic resources for future generations: the next steps," Society for Conservation of Domestic Animal Biodiversity, NBAGR, Karnal, India, February 12, 2009.
199. "Creating the animal nutritional genomics platform for ensuring health and productivity," *Animal Nutrition Association World Conference*, Dehli, India, February 15, 2009.
200. "Defining product opportunities, milestones and timelines for animal genomics markets," Plenary Speaker, International Conference fo Bioeconomy (BioEco 2009), Tianjing, China June 27, 2009.
201. "The pig genome sequence project: a blueprint for agriculture, life and biomedical sciences," Chinese Agricultural University, Beijing, China, June 29, 2009.
202. "Utilization of next generation sequencing technologies for development of a high-density pig SNP genotyping platform," *American Association of Animal Science Annual Meeting*, Montreal, Canada, July 13, 2009.
203. "Comparative genomic tools: SNPippets into evolution," *13th Evolutionary Biology Meeting*, Marseilles, France, September 23, 2009.
204. "Defining product opportunities, milestones and timelines for animal genomics markets," VetHealth Global, Charlottetown, Prince Edward Island, October 8, 2009.
205. "Back to the future: a reflection on where we started, where we are and were we are headed – the swine genome sequencing project," *Pig Genome III Conference*, Wellcome Trust Sanger Institute, Hinxton, United Kingdom, November 2, 2009.
206. "From genome to phenome: animal models of human disease," Invited speaker, New Mexico Bioinformatics and Science Symposium, Sante Fe, NM, March 26, 2010.
207. "Creating the genomics platform: the [ig (*sus scrofa*) speciation and domestication project," *1st International PigEvoDiv Conference, Genomics of the Pig (Sus scrofa): Evolution and Diversity*, Sardinia, Italy, April 6, 2010.
208. "The TJ tabasco story: a porcine blueprint for agriculture, life and biomedical sciences," *9th Chancellor's Lecture*, Center for Advanced Study, University of Illinois, Urbana, IL, April 26, 2010.
209. "Holy grail genomics: perspectives on Disease resistance or the last frontier: the GxE story," Animal Breeding and Genetics Seminar, Wageningen University, The Netherlands, May 28, 2010.
210. "Initial results from the swine genome sequencing project," Invited speaker, Domestic Animal Sequencing Workshop, *32nd Conference of the International Society for Animal Genetics*, Edinburgh, Scotland, July 26, 2010.
211. "Student as the discoverer," Invited convocation speaker, University of Illinois, Urbana, IL, August 20, 2010.
212. "The TJ tabasco genome story," Department of Biology, Indiana University – Purdue University, Indianapolis, IN, March 25, 2011.
213. "Insights into grantsmanship," UIUC Teaching Academy, University of Illinois, Urbana, IL, April 7, 2011.

214. "Providing a malleable, genetically defined cancer model: a porcine solution," University of Berne, Switzerland, May 2, 2011.
215. "Swine in biomedical research: historical perspectives," *Swine in Biomedical Research Conference*, Chicago, IL, July 17, 2011.
216. "Individualizing health and wellness: navigating your personal journey," Elkin R. Isaac Student Research Symposium, Albion College, Albion, MI, April 18, 2012.
217. "The american research university: a renewable resource of innovation for economic development," Edgar Fellows Program, University of Illinois, Urbana, IL, August 18, 2012.
218. "Utilization of the pig in biomedical research: a realization of the pig genome sequencing project," Keynote speaker, David H. Baker Symposium, Des Moines, IA, March 11, 2013.
219. "Exploiting the pig genome project through next gen sequencing: insights into domestication, evolution and selection," *Illumina Conference*, Champaign, IL, November 19, 2013.
220. "The pig genome project: implications for human health," Konkuk University, Seoul, South Korea, November 6, 2013.
221. "Healthcare innovation spectrum: scientific discovery/translational research: from bench to bedside," *Conference on Healthcare Innovation*, Chicago, IL, May 2, 2014.
222. "An inducible large animal cancer model," *Swine in Biomedical Research Conference*, Raleigh, NC, July 6-8, 2014.
223. "Unraveling the swine genome: implications for human health," *34th International Society for Animal Genetics Conference*, Xi'an, China, July 28 – August 1, 2014 .
224. "An inducible large animal cancer model," University of Nebraska Medical Center, Lincoln, NE, August 27, 2014.
225. "Onco-pig: an inducible large animal cancer model," Division of Interventional Radiology, Memorial Sloan Kettering Cancer Center, New York, NY, April 21, 2015.
226. "Onco-pig: an inducible large animal cancer model," Section for Immunology and Vaccinology, National Veterinary Institute, Technical University of Denmark, Copenhagen, Denmark, December 7, 2015.
227. "The Onco-pig Cancer Model (OCM): A platform for transitional, translational and transformative advances in cancer research," Department of Microbiology and Immunology, University of Illinois at Chicago, March 21, 2016.
228. "Transitional, technical, and biological approaches and advances to address unmet clinical needs," *American Association for Cancer Research Annual Meeting*, New Orleans, LA, April 16, 2016.
229. "A novel Approach for advancing translation: The Oncopig cancer model as a platform for partnerships", *Molecular Medicine TRI CON National Conference*, San Francisco, February 21, 2017.
230. "The Oncopig Cancer Model (OCM): A Platform for Transitional, Translational and Transformative Advances in Cancer Research", *American Association for Immunology*, Washington, DC, May 13, 2017.
231. "The Oncopig Cancer Model (OCM): A Platform for Transitional, Translational and Transformative Advances in Cancer Research", *6th Swine in Biomedical Research Conference*, Baltimore, MD, September 25, 2017.
232. "Past and future strategies fo creating porcine models", *The American Association of Laboratory Animal Science*, Austin, TX, October 16, 2017

233. "Future Directions for Laboratory Animal Law in the United States", National Academy of Sciences, National Academy of Engineering and National Academy of Medicine Institute for Laboratory Animal Research *Future Directions for Laboratory Animal Law in the United States Workshop* (<http://nas-sites.org/ilar-roundtable/roundtable-activities/future-of-animal-law/>), Harvard Law, Cambridge, MA, January 26, 2018.
234. "The Oncopig Cancer Model (OCM): A Platform for Transitional, Translational and Transformative Advances in Cancer Research", *Mahr Endowed One Health Lecture*, Iowa State University, April 11, 2018.
235. "The TJ Tabasco Story." BRAD (*Biomedical Research Awareness Day*) University of Illinois-Chicago. April 18, 2019
236. "The Oncopig Cancer Model (OCM): A platform for transitional, translational and transformative advances in cancer research." Duke Cancer Institute. May 5, 2019.
237. "Comparative Genomic Insights into the Future of Large Animal Models." *Future of Biomedical, Agricultural and Biological Systems Research using Large Animals Workshop*, Eunice Shriver Kennedy National Institute of Child Health and Development (NICHD) May 28, 2019.
238. "Modeling Oncology on Demand (MOOD): creating a translational platform for translational cancer therapies." *Future Applications. International Forum on Swine Gene Editing Technology and Policy*, Beijing, China, October 25, 2019.
239. "Elements of a successful research enterprise: creating your path forward." Oklahoma State University College of Veterinary Medicine, Stillwater, Oklahoma. November 13, 2019
240. "The Oncopig Cancer Model (OCM): a platform for transitional, translational and transformative advances in cancer research." Class of 1963 Distinguished Lecturer, Oklahoma State University College of Veterinary Medicine, November 14, 2019.
241. "Levering comparative genomics and phenomics to create malleable genetically defined porcine biomedical models (New pig on the block), Center for Veterinary Medicine, FDA, August 13, 2020.

XI. TRAINEES

A. High school students

Brandi Simmons (Summer 1989), Minority Apprenticeship Program
Malene Minor (Summer 1990), Minority Apprenticeship Program
Anngell Jones (Summer 1991), Minority Apprenticeship Program
Thomas Lally (Summer 2000), National Merit Semi-Finalist, Mounds Park Academy
Theresa Emmerling (Summer 2004)
Julia Kline (Summer 2004)
Danielle Graham (Summer 2007, 2008, 2009), Miami University Marine Biology Program
Nicholas Cho (Summer 2011), University High School I-STEM Summer Program
Aishwayra Gautam (Summer 2011), University High School I-STEM Summer Program

B. Undergraduate students

Paige Meyer, Department of Animal Sciences, University of Illinois at Urbana-Champaign
Training period: Fall 1987 – Spring 1991
Honors: J.B. Turner Merit Scholarship; J.B. Turner Undergraduate Research Grant; Scholarship Award, American Society of Animal Science; Monsanto Research Fellowship (1989); Orville G. Bentley Award for Undergraduate Research (1990)
Research: "Application of DNA fingerprinting for animal identification"

Post-graduate: Student, College of Veterinary Medicine, University of Illinois at Urbana-Champaign

Risa Stack, Department of Genetics and Development, University of Illinois at Urbana-Champaign

Training period: Fall 1988 – Spring 1989

Honors: Graduated with Departmental Honors for Research Project

Research: "Comparative mammalian gene mapping"

Post-graduate: NIH Predoctoral Trainee Program in Developmental Biology, University of Chicago

Eileen Clark, Department of Biology, University of Illinois at Urbana-Champaign

Training period: Spring 1989

Research: "Comparative mammalian gene mapping"

Linda Fox, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: Spring 1989

Research: "Mapping disease resistance genes in pigs"

Allan Kaspar, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: Spring 1989, Fall 1989, Summer 1991

Honors: J.B. Turner Merit Scholarship; Colgate-Palmolive Research Award (1990-1991); Fitzpatrick Scholarship (1990-1991); Roney Research Award (1991)

Research: "Gene expression during development"

Post-graduate: NIH Predoctoral Trainee Program in Immunology, Stanford University

Coretta Cosby, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: 1990-1991

Research: "*Salmonella* colonization in swine"

Post-graduate: Student, College of Veterinary Medicine, University of Illinois at Urbana-Champaign

Elizabeth Atac, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: 1990-1993

Research: "Genetic linkage of genes controlling *Salmonella* resistance in pigs"

Post-graduate: Graduate Program in Genetics, University of Minnesota

Steve Conrad, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: 1992-1993

Honors: J.B. Turner Merit Scholarship

Research: "Mapping disease resistance genes in swine"

Post-graduate: Graduate Program, University of Illinois at Urbana-Champaign

Daniel Krull, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: 1992-1993

Honors: J.B. Turner Merit Scholarship; Roney Research Award (1992); Full scholarship, Summer Research Program, Jackson Laboratory, Bar Harbor, ME

Research: "Mapping cytokine genes in swine"

Post-graduate: Student, College of Veterinary Medicine, University of Illinois at Urbana-Champaign

Brandon Willis, Department of Veterinary Pathobiology, University of Minnesota

Training period: Summer 1994, 1995

Honors: Genetech Scholar; MERCK Academic Achievement Award; Howard Hughes Academic Achievement Award; NSF-Summer Program

Research: "Differential expression of the iNOS gene in macrophage"

Post-graduate: Graduate Program, University of Washington-Seattle

Aleisha Dobbins, Department of Veterinary Pathobiology, University of Minnesota

Training period: 1995

Honors: NIH Minority Training Award

Research: "Identification of novel gene expression by inflammatory macrophages"

Post-graduate: Ph.D. program, Tennessee State University

Stephanie Yonker, Department of Veterinary Pathobiology, University of Minnesota

Training period: 1995-1998

Honors: Undergraduate Research Opportunities Program, NSF - Summer Program

Research: "Determination of allele frequencies of porcine genetic markers"

Post-graduate: Graduate Program, University of California-Berkeley

Charlene Brown, Department of Veterinary Pathobiology, University of Minnesota

Training period: 1996

Honors: NIH Minority Training Award

Research: "Screening of a murine macrophage subtraction cDNA library"

Michele Zawadski, Department of Veterinary Pathobiology, University of Minnesota

Training period: 1996

Honors: Undergraduate Research Opportunities Training Awardee

Research: "Differential gene expression by heterogeneous macrophage populations"

Post-graduate: Student, Veterinary College of the Bahamas

Sofia Zats, University of Illinois at Urbana-Champaign

Training period: 1997

Honors: Undergraduate Research Opportunities Program, NSF - Summer Program

Research: "Characterization of a porcine radiation hybrid panel"

Nadia Dominguez, University of St. Thomas, St. Paul, MN

Training period: 1998

Honors: NIH Minority Training Award

Research: "Role of Fas in dimethylnitrosamine (DMN)-induced hepatotoxicity; contribution of TNF-alpha"

Ixsumary Alvarez, Colegio Universitario Del Este, Trujillo Alto, Puerto Rico

Training period: Summer 2000

Honors: American Society Microbiology Fellowship

Research: "Mapping Porcine Expressed Sequence Tags"

Amber Raney, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: 2003-2006

Honors: University Student Employee of the Year (2004-2005)

Research: "Development of animal models for hemophilia"

Lindsey Wincek, Department of Integrative Biology, University of Illinois at Urbana-Champaign

Training period: 2004-2005

Research: "Comparative analysis of genome structures"

Post-graduate: Ph.D. program in Neurosciences, University of Illinois at Urbana-Champaign

Callie Pollock, Department of Integrative Biology, University of Illinois at Urbana-Champaign

Training period: January 2004 – May 2006

Research: "Comparative genomics of xenobiotic metabolism"

Post-graduate: Ph.D. program in Cancer Biology, Northwestern Feinberg Medical School

Reshma Donthamsetty, University of Illinois at Urbana-Champaign

Training period: August 2005-2009

Research: "Isolation of mesenchymal stem cells from fat"

Brian Mendes, Department of Molecular Biology, Department of Speech Communications,
University of Illinois at Urbana-Champaign

Training period: May 2006-2008

Honors: McNair Scholars Program

Research: "Isolation of Mammary Stem Cells"

Post-graduate: Student, College of Medicine, University of Illinois at Urbana-Champaign

Tara Baxter, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: January 2006-2009

Honors: College of ACES James Scholar

Research: "Suiforme classification and evolutionary analysis"

Kyle Schachtschneider, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: January 2006 – May 2013

Research: "High density SNP discovery"

Post-graduate: Ph.D. program, Department of Animal Sciences, University of Illinois at Urbana-Champaign; Post-Doctoral Associate at Wageningen University, The Netherlands

Christina Gavrilos, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: May 2008-2009

Research: "Mesenchymal stem cell isolation"

Post-graduate: Student, Rush Medical College

Kate Carrato, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: February 2009 – May 2012

Research: "Development of a porcine model of cancer"

Post-graduate: Student, Georgetown University School of Medicine

Brenda Issangya, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: May 2009 – January 2012

Research: “Development of a porcine model of cancer”

Omari Bassett, Tuskegee University

Training period: May 2011 – August 2011; Supported by NSF EBICS program

Research: “Identification and molecular characterization of porcine IL-3”

Isaac Corzine, Department of Integrative Biology, University of Illinois at Urbana-Champaign

Training period: August 2011 – January 2012

Research: “Study of porcine BHMT-2”

Luke Knapp, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: August 2011 – August 2013

Research: “Development of stem cell therapy for myocardial infarction”

Post-graduate: Student, College of Medicine, University of Illinois at Chicago

Fernanda Martins Rodrigues, Federal University of Pelotas, Brazil

Training period: July 2012 – July 2013

Research: “Development of a porcine model of cancer”

Post-graduate: Graduate Program, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Kayleigh Avello, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: January 2013 – May 2013

Research: “Development of a porcine model of cancer”

Larissa Reinkensmeyer, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: April 2013 – July 2015

Research:

Post-graduate: MBA/MSP program in Pharmacology, Loyola University Chicago

Grady Ryan, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: May 2014 – January 2015

Research: “Reproductive traits of minipig models of cancer”

Faith Thomas, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: May 2015 - May 2016

Research: "Development of the Oncopig Cancer Model"

Eileena Guirini, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: May 2016 - December 2017

Research: "Development of the Oncopig Cancer Model"

Post-graduate: Masters program in Biomedical Sciences, Rush University

Aisha Qazi, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: April 2016 - May 2018

Research: "Development of Best Practices for the Feeding and Housing of Swine in Biomedical Research"

Post-graduate: PhD program in Graduate Education and Medical Sciences, University of Illinois at Chicago

Emily Tomlin, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: January 2018 - May 2018

Research: "Diets High in Fat and Fructose Do Not Lead to Nonalcoholic Steatohepatitis"

Alyssa Horne, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: February 2018 - July 2018

Research: "Development of the Oncopig Cancer Model"

Jackson Mooney, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: August 2018 - December 2018

Research: "Development of the Oncopig Cancer Model"

Shovik Patel, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: May 2018 - May 2019

Research: "Development, Maintenance, and Characterization of Porcine Hepatocellular Carcinoma Cell Lines"

Alyssa Ruston, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Training period: October 2017 - August 2019

Research: "Development of Long-term Anesthesia Protocol for Swine"

Sean Konrath, Department of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign

Training period: August 2017 - May 2018

Research: "Development of the Oncopig Cancer Model"

Nickolas Kinachtchouk, Junior, Biology Major, Albion College, Albion, MI

Training period: May 2016 – August 2016

Research: "Development of the Oncopig hepatocellular carcinoma model"

Jordan Walls Newson, Junior, Biology Major, Albion College, Albion, MI

Training period: May 2016 – August 2016

Research: "Development of the Oncopig hepatocellular carcinoma model"

Noah Robinson, Sophomore, Chemistry Major, Albion College, Albion, MI

Training period: May 2018 – August 2018

Research: "Oncopig: A Potential Tool to Enhance Cancer Drug Trials"

C. Predoctoral students

William Futch, Jr., Medical College of Virginia, M.S., 1985

Graduated: University of Richmond, B.S.

Honors: Recipient of 14th Forbes Graduate Research Award-Outstanding Research Proposal, MCV; Society of Leukocyte Biology Travel Award (1995)

Research: "Dissection of macrophage activation using T cell hybridoma lymphokines"
Subsequent positions: Student, Eastern Virginia Medical School, Norfolk, VA; Resident, Medicine, University of Alabama - Birmingham

Melanie (Edwards) Small, Medical College of Virginia, M.S., 1987

Graduated: College of William and Mary, B.S.

Honors: Recipient of 13th Forbes Graduate Research Award-Outstanding Research Proposal, MCV; Trainee of NIH training grant (CA-09210)

Research: "RFLP analysis for detection of minor histocompatibility complex induced graft-versus-host disease following bone marrow transplantation"

Subsequent positions: Ph.D. program, Georgetown University

Lt. Col. Lloyd Lippert, Medical College of Virginia, Ph.D., 1987

Graduated: South Dakota State University, B.S.

Research: "MHC controlled responses to inhibitor formation in hemophilia A"

Subsequent position: Chief, Research Operations, Department of Clinical Investigation, Walter Reed Medical Center

Jeffrey Pullen, Medical College of Virginia, Ph.D., 1987

Graduated: *Cum Laude* from James Madison University, B.S.

Honors: Recipient of 12th Forbes Graduate Research Award-Outstanding Research Proposal, Medical College of Virginia; Trainee of NIH training grant (CA-09210); selected to attend NCI training program on "Histopathology of Neoplasia"

Research: "Regulation of MHC and effector molecules in BMDM"

Subsequent positions: Postdoctoral Fellow, Division of Immunology, Mayo Clinic; Microbiologist, United States Army Medical Research Institute of Infectious Diseases

Namit Ghildyal, University of Illinois at Urbana-Champaign, Ph.D., 1989

Graduated: Pant University, India, B.S., M.S.

Honors: Society of Leukocyte Biology Travel Award (1988)

Research: "Regulation of proto-oncogene and immune system gene expression during macrophage differentiation"

Subsequent positions: Postdoctoral Fellow, Division of Immunology and Rheumatology, Harvard Medical School; Assistant Professor, Division of Immunology and Rheumatology, Harvard Medical School; Vice President, Ortho Biotech Oncology Research & Development Johnson & Johnson Pharmaceutical Research & Development

William Hanafin, University of Illinois at Urbana-Champaign, M.S., 1989

Graduated: University of Illinois, B.S.

Research: General Biology Masters Program Research Project: "Changes in oncogene expression induced by DMN during macrophage differentiation"

Subsequent positions: Research Specialist, Washington University School of Medicine; Research Assistant, University of Illinois at Urbana-Champaign

Mark Rutherford, University of Illinois at Urbana-Champaign, Ph.D., 1990

Graduated: Illinois State University, B.S., M.S.

Honors: USDA Biotechnology Training Grant Fellowship; Graduate College Travel Award (1989); Society of Leukocyte Biology Travel Award (1989, 1990)

Research: "Role of G/M-CSF and CSF-1 in macrophage activation"

Subsequent positions: Postdoctoral Fellow, Department of Biochemistry, St. Jude Children's Research Hospital; Professor and Associate Dean for Graduate Studies, College of Veterinary Medicine, University of Minnesota

David Sehy, University of Illinois at Urbana-Champaign, M.S., 1990

Graduated: University of Illinois at Urbana-Champaign, B.S.

Honors: Graduate Fellowship; Summer Research Program (Full Scholarship), Jackson Laboratory, Bar Harbor, ME

Research: "Mechanisms for macrophage differentiation regulation"

Subsequent positions: Research Associate, Scripps Research Foundation, La Jolla, CA; Director, Product Development, PharMingen, San Diego, CA; Private consultant

Penelope Clamp, University of Illinois at Urbana-Champaign, M.S., 1991

Graduated: University of Reading, UK, B.Sc.Hons.

Honors: Illinois Pork Council Student Research Award (1990)

Research: "Mapping disease and production related genes in swine"

Subsequent position: M.D./Ph.D. Program, Albany Medical College, Albany, NY

Ming-Sheung Lin, University of Illinois at Urbana-Champaign, M.S., 1991

Graduated: National Taiwan University of Taipei, ROC, B.S.

Research: "SLA and production traits in swine"

Subsequent positions: Research Assistant, Taiwan National University Medical Center; Research Assistant, Taiwan National University Medical Center

Todd Wilkens, University of Illinois at Urbana-Champaign, M.S., 1991

Graduated: University of Illinois at Urbana-Champaign, B.S.

Research: "Embryo manipulations to determine etiology of maternal effects" (In association with Dr. D. McLaren)

Subsequent position: Director of Genetic Research, Future Genetics, Inc.

Alice Witsell, University of Illinois at Urbana-Champaign, Ph.D., 1992

Graduated: Auburn University, B.S., M.S.

Honors: Trainee, NIH Training Program in Cell and Molecular Biology; Gamma Sigma Delta; Society of Leukocyte Biology Travel Award (1989, 1991); Finalist, President's Research Award, Society of Leukocyte Biology (1989)

Research: "Dissection of macrophage heterogeneity by molecular phenotyping"

Subsequent position: Postdoctoral Fellow, Joint Center for Radiation Therapy, Harvard Medical School

John Lockwood, University of Illinois at Urbana-Champaign, M.S., 1993

Graduated: University of Illinois at Urbana-Champaign, B.S.

Honors: Society of Toxicology Immunotoxicology Student Research Award (1989); 2nd Place Student Research, Autumn Immunology Conference (1989); 1st Place Paper Presentation, USDA Fellowship Retreat

Research: "Cellular and molecular changes in macrophage differentiation induced by zebiotics"

Subsequent positions: Senior Fellow, Department of Veterinary PathoBiology, University of Minnesota; Research Scientist, Eli Lilly, Greenfield, IN

Yun-Chao Shia, University of Illinois at Urbana-Champaign, Ph.D., 1993

Graduated: National Taiwan University, Taipei, ROC, B.S.; University of Illinois at Urbana-Champaign, M.S.

Honors: Graduate Fellowship; University of Illinois Biotechnology Center Travel Award (1988); Illinois Pork Council Student Research Award (1988)

Research: "Serological and molecular characterization of the swine MHC"

Subsequent position: Research Assistant, Department of Medicine, University of Pennsylvania

Sung-Don Yang, University of Illinois at Urbana-Champaign, Ph.D., 1995

Graduated: Kon-Kak Univ., Seoul, Korea, B.S.; University of Illinois, M.S.

Research: "Regulation of macrophage inflammatory proteins by acute phase proteins"

Subsequent positions: Postdoctoral Fellow, Jackson Laboratory, Bar Harbor, ME; Scientist, Korea Research Institute of Chemical Technology, Taejon, S. Korea

Elizabeth Atac, University of Minnesota, Ph.D. Candidate (Died: May 6, 1994)

Graduated: B.S., University of Illinois

Honors: Genetics and Cell Biology Fellowship; USDA Animal Biotechnology Fellowship

Research: "Animal models for cell-mediated immunity"

Kurt Norman, University of Illinois at Urbana-Champaign, Ph.D. Candidate

Graduated: B.S., University of California, San Diego, CA; College of Medicine, University of Illinois at Urbana-Champaign

Honors: Medical Scholars Program

Research: "TNF α signalling of macrophage functions"

David Shalhevet, University of Illinois at Urbana-Champaign, Ph.D. Candidate; Changed advisors upon relocation to the University of Minnesota

Graduated: B.S., M.Sc. Agr., The Hebrew University, Rehovot, Israel

Honors: USDA Predoctoral Biotechnology Fellowship; Gamma Sigma Delta

Research: "Mapping porcine cytokine genes associated with reproduction"

Jong-Keuk Lee, University of Minnesota, Ph.D., 1996

Graduated: B.S., M.S., Seoul National University

Honors: Korean Government Overseas Scholarship

Research: "Molecular characterization of the swine major histocompatibility complex"

Subsequent positions: Post-doctoral fellow, National Cancer Institute

Arindam Bhattacharjee, University of Minnesota, Ph.D., 1999

Graduated: B.Sc., Banaras Hindu University, India; M.Sc., University of Saskatchewan, Canada

Research: "Use of differential display in identifying biomarkers for immunotoxicology"

Subsequent positions: Post-doctoral fellow, Farber Cancer Center, Harvard University; Senior Scientist and Strategic Collaborations Manager, Life Sciences, Agilent

Tom Horn, University of Minnesota, Ph.D., 2000

Graduated: B.S., University of Wisconsin - Madison

Honors: Toxicology Program; USDA Fellowship; Honorable Mention in Society of Toxicology Student Research Award

Research: "Utilization of TNF-alpha receptor knockout mice to assess the contribution of TNF-alpha in toxicological responses"

Subsequent position: Post-doctoral fellow, Department of Medicine, University of Minnesota

Xuexian Zhang, University of Minnesota, Ph.D., 2000

Graduated: B.Sci., Shanxi Agricultural University, China; M.Sci., Beijing Agricultural University, China

Honors: American Virology Society Travel Award

Research: "Identifying genes associated with host resistance"

Subsequent positions: Post-doctoral fellow, College of Veterinary Medicine, University of Minnesota

Chang Chun (Alan) Wang, Ph.D. Candidate

Graduated: B.S. Beijing Normal University, Beijing; M.S. China Agricultural University

Honors: Virology Society Travel Grant

Research: "Genetic basis of disease resistance"

Russell Butterfield, Veterinary Pathobiology, University of Illinois, Ph.D., 2001

Graduated: Brigham Young University

Honors: Medical Scholars Program

Research: Mapping autoimmune diseases

Subsequent positions: Student, University of Utah School of Medicine; Intern/Resident, University of Utah

Current position: Assistant Professor in the Departments of Neurology and Pediatrics

Randall Roper, Veterinary Pathobiology, University of Illinois, Ph.D., 2001

Graduated: Brigham Young University

Honors: NIH Molecular Biology Training Grant, Segre Award

Research: "Mapping autoimmune diseases"

Subsequent positions: Post-doctoral fellow, Johns Hopkins University; Assistant Professor, Department of Biology, Indiana University-Purdue University Indianapolis (IUPUI)

Nathan Meeker, Veterinary Pathobiology, University of Illinois, Ph.D. candidate

Graduated: Brigham Young University

Honors: Medical Scholars Program

Subsequent positions: Student, College of Medicine, University of Illinois; Intern, Children's Hospital of Philadelphia; Assistant Professor, Pediatrics, University of Utah

Meredith Mazur, Animal Sciences, University of Illinois, M.S. 2006

Graduated: B.S. Animal Sciences University of Illinois, 2003

Honors: Jonathan Baldwin Turner Scholarship; National Society of Collegiate Scholars; USDA Agricultural Genomics and Public Policy Fellowship; ISAG Poster Award (2004)

Research: "Swine model of atherosclerosis"

Subsequent position: Pharmaceutical Sales Representative, Eli Lilly

Erin Rochelle, Animal Sciences, University of Illinois, Ph.D., 2008

Graduated: B.S., Virginia Polytechnic Institute and State University, 2004

Honors: Gamma Sigma Delta; Agriculture Genome and Public Policy Fellowship (2004-2006); Graduate College Travel Award (2006)

Research: “Effects of genetic variability on disease susceptibility”

Subsequent positions: NIH Postdoctoral Fellow; AAAS Congressional Fellow

Kristy Kuzmuk, University of Illinois, MBA, 2008; Animal Sciences, Ph.D., 2009

Graduated: B.S. Animal Sciences, University of Illinois, 2002

Honors: Jonathan Baldwin Turner Scholarship; Graduate College Travel Award (2003); Neal Jorgensen Swine Genome Award (2004); Kauffman Foundation Graduate Student Award (2007); MBA Director’s Scholarship (2007)

Research: “Creating a genetically malleable porcine model of cancer”

Subsequent positions: Vice President of Operations, Precision Graphics; Senior Director of Operations, Office of the Vice President for Research, University of Illinois

Radhika Ganu, Nutritional Sciences, University of Illinois, Ph.D., 2010

Graduated: B.Sc. Microbiology, University of Mumbai, 2004; M.Sc. Health Sciences, University of Pune, 2006

Honors: Toshiro Nishida Research Award (2009); UIUC Nutrition Symposium Oral Presentation Award (2009), UIUC; Teacher Excellence Award (2008)

Research: “Porcine developmental regulation of betaine-homocysteine methyltransferase”

Subsequent position: Post-doctoral fellow, Baylor

Lisa Trump, Animal Sciences, University of Illinois, Ph.D., 2011

Graduated: B.S. Animal Sciences, University of Illinois, 2003

Honors: USDA Agriculture Genome Sciences and Public Policy Fellowship; Gamma Sigma Delta Agricultural Honor Society; Bronze Tablet; James Scholar; Phi Kappa Phi Honor Society; National Society of Collegiate Scholars

Research: “Monitoring cell-to-cell communication in 3D microenvironments”

Subsequent Position: Post-doctoral fellow, University of Cincinnati Children’s Hospital

Erich Lidstone, Bioengineering, University of Illinois, M.D./Ph.D., 2012

Graduated: B.S., Worcester Polytechnic Institute, 2006

Honors: Thomas Buetow Memorial Scholarship (2009); Charles Wert India-Illinois Scholarship (2010); George and Amanda Hanley Scholarship (2010); O’Morchoe Leadership Fellowship (2010); University of Illinois College of Medicine Hazel I. Craig Research Fellowship (2010); Thomas Buetow Memorial Scholarship (2010); Days of Molecular Medicine Scholarship (2010)

Research: “Biosensor technology for exploring cellular mechanics”

Kyle Schatschneider, Animal Sciences, University of Illinois, Ph.D., 2013

Graduated: B.S., Animal Sciences, University of Illinois, 2008

Honors: Sanger Institute Travel Award (2009)

Research: “Epigenomic regulation of innate immunity”

Subsequent position: Post-doctoral fellow, Wageningen University, The Netherlands

Current position: Assistant Research Professor, University of Illinois-Chicago.

Wenping Hu, Biochemistry and Molecular Biology, China Agricultural University, Ph.D., 2014

Graduated: B.E., Bioengineering, Nanchang University, China, 2006; B.A., Business Administration, Nanchang University, China, 2006

Honors: Outstanding Report Award, Annual Conference of the Natural Science Foundation of China (2011); Excellent Scientific Research Achievement Award, China Agricultural University (2012)

Research: “An inducible transgenic porcine model for human cancer”

Subsequent position: Assistant Professor, Institute of Animal Science, Chinese Academy of Agricultural Science

Karine Rech Begnini, Federal University of Pelotas, Brazil, Ph.D., 2015

Graduated: M.S., Federal University of Pelotas, Brazil, 2012; B.S., Federal University of Pelotas, Brazil, 2009

Research: “Effects of oncogene expression and genotype on chemotherapy drug resistance in porcine cells”

Kwame Darfour-Oduro, Animal Sciences, University of Illinois, Ph.D., 2015

Graduated: B.S., University of Ghana, Legon 2001; M.Phil., Animal Science, 2006

Honors: First Class Honors, University of Ghana (2001); Tufts University Exchange Program Award (2003-2004)

Research: “Whole genome sequencing assembly”

Subsequent position: Post-doctoral research associate, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Molly Melhem, Bioengineering, University of Illinois, M.D./Ph.D., 2015

Graduated: Biological and Environment Engineering, Cornell University, 2007

Research: “Utilizing in vivo models to further the study of tissue regeneration and stem cell implantation”

Current position: University of Illinois medical student

Fang Yang, Nutritional Sciences, University of Illinois, Ph.D., 2015

Graduated: B.S. Animal Science, China Agricultural University, 2005; M.Sc., China Agricultural University, 2007

Honors: Abbott Nutrition Scholarship (2010); William Rose Travel Award (2011); Women in Bioinformatics Award (2011); Graduate College Travel Award (2011); Frank W. Kari Memorial Endowment Award (2013)

Research: “Dietary regulation of microbiome diversity: implications for host immunity”

Arun Kumar De, Animal Sciences, University of Illinois, Ph.D. 2018

Graduated: B.V.Sc. (Bachelor of Veterinary Science and Animal Husbandry), West Bengal University of Animal and Fisheries Sciences, India, 2005; M.V.Sc (Master of Veterinary Science), National Dairy Research Institute, India, 2007

Honors: ICAR Junior Research Fellowship (2007); ICAR International Fellowship (2011-2012); Society for Advancement of Human and Nature (SADHNA) Young Achievers Award (2013)

Research: “Comparative genomics of drug metabolism genes”

Yingkai Liu, Sichuan Agricultural University, China, Ph.D. 2018

Graduated: B.A., Animal Sciences, Sichuan Agricultural University, China (2006)

Honors: Excellent Scientific Research Achievement Award, Sichuan Agricultural University (2011, 2012)

Research: "Latexin expression in hematopoietic malignancies"

D. Post-doctoral fellows

Elizabeth Eustis-Turf, Ph.D., Wayne State University, 1985

Training period: 1985-1987

Research: "Expression and regulation of MHC genes following electroporation into bone marrow stem cells"

Subsequent position: Associate Professor, Biomedical Engineering, Medical College of Virginia

Michael Myers, Ph.D., Indiana University, 1984

Training period: 1985-1988

Research: "Cellular and molecular effects of DMN exposure on macrophage differentiation"

Awards: NIH training grant (CA-09210)

Subsequent position: Research Scientist, FDA

Robert Blanton, M.D., Ph.D., Virginia Commonwealth University, 1985

Training period: 1986

Research: "Expression of interferon- γ , transferrin and acetyl-LDL receptors during macrophage differentiation"

Subsequent position: Chief Surgery Resident, Vanderbilt University

Ming-Che Wu, Ph.D., University of Illinois at Urbana-Champaign, 1987

Training period: 1987-1988

Research: "Serological and molecular analysis of the swine MHC"

Subsequent position: Associate Professor, Taiwan Livestock Research Institute; Director, Taiwan Center for Genomic Technology

Carol Fajfar-Whetstone, Ph.D., University of Illinois at Urbana-Champaign, 1987

Training period: 1990-1992

Research: "Development of embryonic stem cell lines for construction of genetically defined animals"

Subsequent position: Research Scientist, Carle Hospital, Urbana, IL

Marite (Ivanova) Bradshaw, Ph.D., V. Engelhardt Institute of Molecular Biology, USSR Academy of Sciences, 1984

Training period: 1990-1993

Research: "Genetic regulation of macrophage inflammatory proteins"

Subsequent position: Research Associate, University of Wisconsin, Madison

Laurie Rund, Ph.D., University of Georgia, 1989

Training period: 1991-1993

Honors: NIH Individual Research Service Award; Cargill Excellence Fellowship

Research: "Characterization of gene expression by transgenesis"

Subsequent position: Research Assistant Professor, Department of Animal Sciences, University of Illinois at Urbana-Champaign

Rebecca Sandborg, Ph.D., University of Illinois at Urbana-Champaign, 1986

Training period: 1993-1994

Honors: American Heart Association Fellowship (1993-1995)

Research: "Regulation of macrophage responses to TNF α "

Subsequent position: Research Associate, University of Illinois at Urbana-Champaign

Adam Paszek, Ph.D., University of Minnesota, 1993

Training period: 1993-1996

Research: "Mapping QTL in swine"

Subsequent positions: Assistant Professor, University of Minnesota; Director of Biotechnology, Cobb-Vantless, Tyson Foods; CEO/President, Genetics

Patricia Wilkie, Ph.D., University of Minnesota, 1988

Training period: 1995-1998

Research: "Strategies for mapping complex traits/responses"

Subsequent position: Research Associate, College of Biological Sciences, University of Minnesota

Daniel Fraser, Ph.D., University of Minnesota-Duluth, 1995

Training period: 1995-2000

Honors: NIH Individual Research Service Award

Research: "*In situ* analysis of novel genes expressed during xenobiotic exposure"

Subsequent position: Research Associate, Medical School, University of Minnesota-Duluth

Rachel Hawken, Ph.D., University of Melbourne

Training period: 1997-2000

Research: "Characterization of a porcine radiation hybrid panel"

Subsequent position: Research Scientist, CSIRO, Brisbane, Australia

Current position: Director of Genomics and Quantitative Genetics at Cobb-Vantress

Margarita Rogatcheva, Ph.D., Institute of Cytology and Genetics, Novosibirsk, Russia, 1997

Training period: 2001- 2006

Research: "Recombineering of BACs for genetic manipulation"

Subsequent position: Research Scientist, Axial Biotech Inc., Salt Lake City, UT

Kelly Swanson, Ph.D., University of Illinois, 2001

Training period: 2002-2004

Research: "Nutritional genomics: implications for companion animals"

Current position: Kraft Professor of Nutritional Sciences, University of Illinois at Urbana-Champaign

Kefei Chen, Ph.D., Institute of Veterinary Medicine, University of Goettingen, Germany, 2004

Training period: 2004-2007

Research: "Genetic resources, genome mapping and evolutionary genomics of the pig"

Subsequent position: Senior Research Associate, Australian Centre for Ancient DNA (ACAD), University of Adelaide

Tor Jensen, Ph.D., Chemical and Biomolecular Engineering, Northwestern University, 2004

Training period: 2006-2012

Research: "Cloned pig model for studying the clinical application of stem cell therapeutics after myocardial infarction"

Subsequent Positions: Visiting Research Assistant Professor, Institute for Genomic Biology, University of Illinois at Urbana-Champaign; Laboratory Manager, Biomedical Research Center, Division of Biomedical Sciences, University of Illinois at Urbana-Champaign

Deb Swanson, Ph.D., Johns Hopkins University, 2006

Training period: 2007-2009

Research: "Therapeutic uses and biology of adult stem cells"

Subsequent positions: Research Associate, Institute for Genomic Biology, University of Illinois at Urbana-Champaign; Vice President of Business Development and Senior Scientist, Ploughman Analytics, Inc.

Maria Pieters, D.V.M., Ph.D., University of Minnesota, 2008

Training period: 2008-2010

Research: "Susceptibility and resistance to infectious diseases in pigs"

Subsequent positions: Research Associate, College of Veterinary Medicine, University of Minnesota; Assistant Professor, Department of Veterinary Population Medicine and Veterinary Diagnostic Laboratory, University of Minnesota

Ying Liang, Ph.D., University of Kentucky, 2005

Training period: 2009-2011

Honors: NIH Pre-Doctoral Fellowship (2002); American Federation for Aging Research and General Electric Healthcare Junior Investigator Award for Excellence in Biomarker Research (2007); BD Bioscience Award (2008); National Cancer Institute Fellowship (2009)

Research: "Inducible transgenic porcine cancer models and hematopoietic stem cell aging"

Subsequent position: Assistant Professor, Department of Internal Medicine, University of Kentucky

Kyle Schatschneider, Ph.D., University of Illinois, 2013

Training period: 2013-2017

Honors: Wellcome Trust Sanger Institute Travel Award (2009); University of Illinois Fellowship, Department of Animal Sciences (2012); International Society for Animal Genetics Early Career Travel Bursary (2014)

Research: "Porcine DNA methylation and gene transcription profiling"

Kwame Darfour-Oduro, Ph.D., University of Illinois, 2015

Training period: 2015-2018

Research: "Development of porcine hepatocyte cell carcinoma"

Luke Jordan, Ph.D., University of Minnesota, 2016

Training Period: 2019-present

Research: "Development of porcine bladder and hepatocyte cell carcinomas"

E. Medical and veterinary students

Joan Weber, B.S., Virginia Polytechnical Institute and State University

Training period: 1983-1984

Honors: American Cancer Society Fellow, Massey Cancer Center; A. D. Williams Clinical Fellow, Medical College of Virginia

Research: "Characterization of HSV-2 glycoproteins in carcinoma cells"; "Drug-delivery systems: monoclonal antibodies and liposomes"

Post-graduate: Internal Medicine Residency, Vanderbilt Medical Center, Nashville, TN

Genevieve Lambert, B.A., University of Virginia

Training period: 1983

Honors: American Cancer Society Fellow, Massey Cancer Center

Research: "Human T cell hybridomas"

Post-graduate: Pediatrics Residency, Columbia College of Surgeons and Physicians

Robert Blanton, B.S., Duke University; Ph.D., Virginia Commonwealth University

Training period: 1986

Honors: Undergraduate Research Opportunity Program Award; American Cancer Society Fellow, Massey Cancer Center

Research: "Novel strategies for induction of macrophage anti-tumor activity"

Post-graduate: Student, Medical College of Virginia

Kristen Nelson, B.S., Luther College; M.S., Drake University

Training period:

Honors: Undergraduate Research Opportunity Program, University of Minnesota

Research: "Mapping disease resistance genes"

Post-graduate: Student, College of Veterinary Medicine, University of Minnesota

F. Visiting scholars

Xiu-Mei Wang, Ph.D., Vice-chair of Microbiology, Inner Mongolia Medical School, PRC

Visiting period: 1986-1987

Betts Carpenter, Ph.D., Director, Clinical Immunology, University of Pittsburgh Medical School

Visiting period: July 1987

Dmitry Kuprash, Ph.D., Research Scientist, USSR Academy of Sciences, Moscow

Visiting period: June – October 1991; Supported by International Union Against Cancer)

Archana, Ph.D., Scientist, National Dairy Research Institute, Karnal, India

Visiting period: February – June 1992; Supported by UNDP, FAO

Luca Fontanesi, Ph.D. Candidate, Istituto Di Allevamenti Zootecnici, University of Bologna, Italy

Visiting period: September 1994 – March 1995

Virginia Massey, Ph.D. Candidate, Texas A&M University, College Station, TX

Visiting period: March 1995 – August 1998

B.R. Yadav, Ph.D., Associate Professor, National Dairy Research Institute, Karnal, India

Visiting period: July – September 1995

Jin Hai Sun, Professor, Changchun University of Agricultural and Animal Sciences, P.R. China
Visiting period: January 1998 – September 1998

Manohar Sangwan, Assistant Professor, Haryana Agricultural University, India
Visiting period: May 1999 – June 1999

Hiroshi Yasue, Associate Director, Animal Breeding and Genetics, National Institute for Animal Industry, Tsukuba, Japan
Visiting period: May 1999 – July 1999

Ning Li, Associate Professor and Director, Center for Agrobiotechnology, China Agricultural University, Beijing, China
Visiting period: August – September, 1999

Sansoon Sun, Associate Professor, Korean National Livestock Research Institute
Visiting period: June – September 2003

Wirdateti, M.Sc., Research Associate, Puslit Biologi (Division of Zoology) LIPI, Indonesia
Visiting period: March 2007

Monika Sodhi, Ph.D., Scientist, National Bureau of Animal Genetic Resources, Haryana, India
Visiting period: December 2007 – August 2008

Tiago Collares, Ph.D., Professor, Federal University of Pelotas, Brazil
Visiting period: May – December 2013

Fabiana Seixas, Ph.D., Professor, Federal University of Pelotas, Brazil
Visiting period: May – December 2013

XII. TEACHING

A. Medical College of Virginia

1. Medical students: Infection and Immunity Lecturer: 1982, 1983, 1984, 1985; Review Session: 1983, 1984, 1985; Laboratory: 1982
2. Immunobiology (MIC 506): Lecturer: 1982, 1983, 1984, 1985; Laboratory: 1983, 1984, 1985
3. Advanced Immunology (MIC 685): 1982, 1983, 1984, 1985
4. Seminar/Journal Club (MIC 590) Coordinator: 1982, 1983, 1984, 1985
5. Clinical Immunopathology Lecturer: 1983
6. Introduction to Research (MIC 508-509) Laboratory: 1985, 1986
7. Prokaryotic/Eucaryotic Biology (MIC 504): 1985
8. Microbial Biotechnology (MIC 691): 1985, 1986
9. Advanced Molecular Genetics (MIC 604): 1986
10. Basic Science Preceptor, Medical School Elective (5600) Laboratory, Hybridoma Technology: 1985, 1986

B. University of Illinois at Urbana-Champaign

1. Immunogenetics (ANS 310) Lecturer: 1988, 1989, 1990, 1992; Coordinator: 1991
2. Advanced Topics in Immunology (VP/G&D 418): 1987, 1988, 1990
3. GI and Methanogenic Bacterial Fermentations (ANS 385): 1987, 1989, 1991

4. Immunological Methods (ANS/VP 444) Laboratory: 1987, 1988, 1989, 1990, 1991
5. Advanced Topics in Reproductive Physiology (ANS 412): 1988
6. Medical School Basic Science Immunology Course (Unit 10): Spring 1988
7. Immunology Seminar (ANS 490) Coordinator: 1987, 1988, 1989, 1989, 1990, 1991, 1992
8. Introduction to Agriculture (AGR 100): 1990, 1991
9. Undergraduate Seminar (ANS 298) Coordinator: 1991, 1992
10. Cell Structural Biology and Development (CSB 361): 1991
11. Animal Genomics (AniSci 199): 2001
12. Genetics Seminar (AniSci 499) Coordinator: 2002
13. Discovering the Genome (AniSci 199): 2002, 2003
14. Agricultural Genomic Sciences and Public Policy (AnSci 492): 2003
15. Discovery Course "Discovering the Genome" (AniSci 199): 2003, 2004, 2005
16. Genetics and Genomics (AnSci 590): 2003, 2004
17. Cell Molecular and Development Biology (AnSci 590): 2003, 2004
18. Nutritional Genomics (NutSci 510): 2004
19. Creating Value in the Life Sciences (AniSci 492): 2006, 2007, 2008
20. Certificate for Entrepreneurial Management Lecturer: 2008, 2009
21. Discovery Course "Art, Creativity and Diversity" (FAA199): 2008, 2009, 2010
22. Human Genetics and Genomics (Fulbright Scholar, University of Salzburg): 2010

C. University of Minnesota

1. Advanced Immunology (CAPS 8193): 1994
2. Veterinary Immunology (VPB 5701): 1994, 1995, 1997
3. Frontiers in Immunology III: Clinical Immunology (MicB 8218): 1995, 1997, 1999
4. Directed Research in Toxicology (Txcl 8800): 1995, 1996
5. Investigative Toxicology (Txcl 8572): 1995
6. MAST Class: Biotechnology in Agriculture (Center for Education in Agriculture and Extension): 1997
7. MAST Class: World Topics in Agriculture (AgEd 2029): 1998, 1999, 2000
8. Mechanisms of Animal Health and Disease (MVB 8201): 1998, 1999
9. Applied Veterinary Genetics (CVM 5406): 1998, 1999, 2000
10. Quantitative Physiology (Institute of Technology, College of Veterinary Medicine): 1998, 1999

XIII. REFERENCES

Provided upon request.