

CURRICULUM VITAE

NAME: DAVID W. PASCUAL, Ph.D.

OFFICE ADDRESS: Professor of Immunology
Wyoming Excellence Chair in Brucellosis
Department of Veterinary Sciences
College of Agriculture, Life Sciences, & Natural Resources
University of Wyoming
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1000 E. University Ave.
Laramie, WY 82071

Phone: (307) 766-4577
E-mail: dpascual@uwyo.edu

EDUCATION:

1977-1980 University of Florida, Gainesville, FL, B.S., Microbiology

1981-1985 University of Mississippi Medical Center, Jackson, MS, M.S.,
Microbiology

1985-1987 University of Mississippi Medical Center, Jackson, MS, Ph.D.,
Microbiology

1987-1988 University of Alabama at Birmingham, Department of Physiology
and Biophysics, Birmingham, AL, Postdoctoral Fellow

1988-1990 University of Alabama at Birmingham, Department of Physiology,
Birmingham, AL, Postdoctoral Fellow, NIH Hypertension
Training Grant Fellowship

1989 AAI Course in Advanced Immunology, Lindenberg College, St.
Charles, MO

2007 Biosafety Level 3 Safety Training, Emory University Onsite
Applied Biosafety Training Program, Bozeman, MT

PROFESSIONAL AND TEACHING EXPERIENCE:

1986 and 1987 Teaching responsibilities in Medical Microbiology to School of Health Related Sciences, University of Mississippi Medical Center

1987-1990 Postdoctoral Fellow, Department of Physiology, University of Alabama at Birmingham

1990: Consultant, Masonic Medical Research Laboratory, Utica, New York

1990-1992 Research Instructor, Departments of Oral Biology and Microbiology, University of Alabama at Birmingham

1992-1995 Research Assistant Professor, Department of Oral Biology, University of Alabama at Birmingham

1991: Lecturer, Department of Microbiology, Advanced Graduate Student Course, "Mucosal Immunology," University of Alabama at Birmingham

1993: Lecturer, Department of Oral Biology, Post-Graduate Student Course, "Oral Microbiology and Immunology," University of Alabama at Birmingham

Lecturer, Department of Oral Biology, Dental "Cellular and Molecular Immunology," University of Alabama at Birmingham

1995-1998: Assistant Professor of Immunology, Veterinary Molecular Biology, Montana State University

1998-2005 Associate Professor of Immunology, Veterinary Molecular Biology, Montana State University

1996-2012: Lecturer, Veterinary Molecular Biology, Biotechnology Program, Montana State University

1998-2012: Course Coordinator, Veterinary Molecular Biology, "Advanced Immunology," Montana State University

2005-2012: Lecturer, Veterinary Molecular Biology, "Infectious Diseases," Montana State University

2000-2012: Director, Center for Bison Studies

2001-2012: tenured faculty

2003-2011: Affiliate Associate Professor, Department of Immunology, University of Washington

2005-2012: Professor of Immunology, Department of Immunology & Infectious Diseases (formerly *Veterinary Molecular Biology*), Montana State University

2012-2013: Affiliate Professor of Immunology, Department of Immunology & Infectious Diseases, Montana State University

2012-2024: Professor of Immunology, Department of Infectious Diseases & Immunology (formerly *Department of Infectious Diseases & Pathology*), College of Veterinary Medicine, University of Florida

2024-present: Affiliate Professor of Immunology, Department of Infectious Diseases & Immunology, University of Florida

2012-2014: Member, Emerging Pathogens Institute, University of Florida

2012-2024: Graduate Faculty, The Graduate School, University of Florida

2013, 2014: Lecturer, College of Dentistry, DEN6128: "Dental Host Defense"

2015-present: tenured faculty

2018-2020: Interim Associate Dean of Research & Graduate Studies, College of Veterinary Medicine, University of Florida

2020-present: Associate Dean of Research & Graduate Studies, College of Veterinary Medicine, University of Florida

2020-present: Member, Animal Molecular & Cellular Biology Graduate Program

2023: Lecturer, GMS5905 – Mucosal Immunology

2024-present: Professor of Immunology (tenured) and Wyoming Excellence Chair in Brucellosis, Department of Veterinary Sciences, College of Agriculture, University of Wyoming

RESEARCH SUPPORT:

2012 - 2025

Project period September 1, 2023 - August 31, 2024: "Regulatory Cell Therapy for Sjögren's Syndrome," NIH-NIDCR 2R56 DE-026450-06A1. \$350,750 for 09/01/23 - 08/31/24. \$350,750 for 09/01/23 - 08/31/24. D. W. Pascual, Principal Investigator.

Project period April 24, 2023 - September 30, 2025 "A Novel Immunological-Directed Synthetic Biology-Based Drug for the Treatment of Multiple Sclerosis," NIH-NIAID 1R44 AI-174844-01A1. \$2,232,037 total; \$499,495 subaward total. \$118,191 for subproject, 04/24/23 - 03/31/24. Rise Therapeutics, LLC, Principal Investigator; D. W. Pascual, subawardee Project Leader.

Project period July 1, 2022 - June 30, 2024 "A Novel Immunologically Directed Probiotic for the Treatment of Type 1 Diabetes," NIH-NIDDK 1R44 DK134274-01. \$1,021,316 total; \$260,734 subaward total. \$128,908 for subproject, 07/01/22 - 06/30/23. Rise Therapeutics, LLC, Principal Investigator; D. W. Pascual, subawardee Project Leader.

Project period February 23, 2021 - January 31, 2023 "A Novel Immunologically Enhance Probiotic for Treating Rheumatoid Arthritis," NIH-NIAID 1R44 AI-157031-01. \$1,922,693 total; \$142,484 subaward total. \$71,614 for subproject, 02/23/22 - 01/31/23. Rise Therapeutics, LLC, Principal Investigator; D. W. Pascual, subawardee Project Leader.

Project period September 15, 2020 - December 31, 2023: "*Snodgrassella alvi* as an attenuated live vaccine against *Neisseria gonorrhoeae*," NIH-NIAID 1R01 AI-151424-01. \$190,625 for 09/15/20 - 08/31/21. \$432,498 for 09/15/20 - 08/31/22. D. W. Pascual, Principal Investigator.

Project period May 24, 2020 - March 31, 2021: "*Mucosal Subunit Vaccines for SARS-CoV-2*," University of Florida Clinical and Translational Science Institute, NIH National Center for Advancing Translational Sciences UL1TR001427. \$99,115 for 05/24/20 - 03/31/21. D. W. Pascual, subawardee Project Leader.

Project period August 17, 2017 - December 31, 2023: "Naso-oropharyngeal *Brucella* Infections and Mucosal Immune Protection," NIH-NIAID 1R01 AI-125516-03. \$377,084 for 08/17/21 - 07/31/22. \$1,885,421 for 08/17/17 - 07/31/22. D. W. Pascual, Principal Investigator.

Project period April 1, 2017 - March 31, 2023: "Regulatory Cell Therapy for Sjögren's Syndrome," NIH-NIDCR 1R01 DE-026450-01. \$362,188 for 04/01/21 - 03/31/22. \$1,810,940 for 04/01/17 - 03/31/22. D. W. Pascual, Principal Investigator.

Project period January 20, 2016 - December 31, 2022: "Mucosal Vaccines for Brucellosis," NIH-NIAID 1R01 AI-123244-01. \$375,000 for 01/20/19 - 12/31/19. \$1,888,659 for 01/20/2016 - 12/31/2020. D. W. Pascual, Principal Investigator.

Project period August 15, 2017 - December 31, 2019: Supplement to "Mucosal Vaccines for Brucellosis," NIH-NIAID 1R01 AI-123244-02S1. \$61,758 for 01/01/18 - 12/31/18. \$125,804 for 08/15/2017 - 12/31/2019. D. W. Pascual, Principal Investigator.

Project period August 30, 2019 - August 30, 2020: "Evaluation of VTC-D87 with IL-2munein to Measure Treg Durability in the NOD Model," \$12,000 total for contract, 08/30/2019 - 08/30/2020. D. W. Pascual, Principal Investigator.

Project period July 10, 2019 - June 30, 2021: "A Novel Probiotic for the Treatment of Sjögren's Syndrome," NIH/NIDCR 2 R44 DE-026379-02. \$146,689 for subproject, 07/01/2019 - 06/30/2021. Rise Therapeutics, LLC, Principal Investigator; D. W. Pascual, subawardee Project Leader.

Project period August 1, 2016 - July 31, 2017: "A Novel Probiotic for the Treatment of Sjogren's Syndrome," NIH/NIDCR 1 R43 DE-026379-01. \$225,000 total; \$65,000 for subproject. Virtici, LLC, Principal Investigator; D. W. Pascual, subawardee Project Leader.

Project period April 15, 2016 - March 31, 2020 "A Novel Therapeutic for Treating Multiple Sclerosis," NIH-NIAID 1R44 AI-125165-01. \$2,469,812 total; \$50,000 for subproject, 04/15/17 - 03/31/20. Virtici, LLC, Principal Investigator; D. W. Pascual, subadwardee Project Leader.

Project period March 15, 2016 - February 28, 2019: "Fimbriae Countermeasures for Type 1 Diabetes," NIH-NIAID 1R21 AI-121745-01. \$401,462 for 03/15/2016 - 02/28/2018. D. W. Pascual, Principal Investigator.

Project period May 1, 2016 - April 30, 2017: "Sony Cell Sorter SH800 System," NIH 1S10 OD021676-01. \$295,625 for 05/01/2016 - 04/30/2017. D. W. Pascual, Principal Investigator.

Project period April 25, 2016 - March 31, 2021: "Heterologous Immunity and Host Susceptibility to Emerging Alphaviral Infections," NIH-NIAID 1K08 AI-116980-01. Amy Vittor, Principal Investigator; D. W. Pascual, Mentor

Project period September 30, 2013 - September 29, 2017: "Brucellosis Vaccines for Livestock," USDA-NIFA 2013-01165. \$500,000 for 09/30/13 - 09/29/17. D.W. Pascual, Principal Investigator.

Project period April 9, 2013 - April 8, 2014: "*Brucella abortus* Strain 19 Challenge Study in Calves," ZOETIS-Pfizer 140-N-3329337. \$60,677 for 04/09/13 - 04/08/14. D.W. Pascual, Principal Investigator.

Project period May 1, 2013 - April 30, 2015: "Mucosal Therapeutics for Type 1 Diabetes," Univ. of Florida Opportunity Fund. \$85,000 for 05/01/13 - 04/30/14. D.W. Pascual, Principal Investigator.

Project Number July 1, 2012 - June 30, 2017: "Mucosal Vaccination to Protect Against HIV-1 Infection at Mucosal Sites," NIH/NIAID 1R01 AI-102747, \$350,140 for 07/01/2012 - 06/30/2017. D. W. Pascual, Co-Investigator; Herman F. Staats, Principal Investigator.

2004 - 2011

Project period May 1, 2011 - April 30, 2017: "Subunit Vaccines for *Brucella* Pathogens," NIH-NIAID 1R01 AI-093372-01. \$2,239,383 for 05/01/2011 - 04/30/2017. D. W. Pascual, Principal Investigator.

Project period August 19, 2011 - July 31, 2016: "Novel Multivalent Vaccine for Anthrax and Botulinum," NIH-NIAID 1R01 AI-093370-01, \$185,000 for 08/19/11 - 07/31/2016. D. W. Pascual, Project Leader; Mansour Mohamadzadeh, Principal Investigator.

Project period September 15, 2010 - September 14, 2012: "Brucellosis Vaccines, MT," USDA-NIFA 2010-34397-21391. \$283,854 for 09/15/10 - 09/14/11. D.W. Pascual, Principal Investigator.

Project period August 15, 2010 - May 31, 2012: "Mechanisms of IL-35 Protection Against Arthritis," NIH-NIAMS and Office of Research on Women's Health (ORWH) 1R21 AR-058010. \$366,668 for 08/15/10 - 05/31/12. D. W. Pascual, Principal Investigator.

Project period September 1, 2008 - February 28, 2015: "Mucosal Therapy for Autoimmunity," NIH-NIAID 1 R01 AI-078938. \$1,948,750 for 09/01/08 - 02/28/15. D. W. Pascual, Principal Investigator.

Project period September 1, 2009 - August 31, 2010: "Brucellosis Vaccines, MT," USDA-NIFA 2009-34397-20133. \$284,348 for 09/01/09 - 08/31/10. D.W. Pascual, Principal Investigator.

Project period September 1, 2008 - August 31, 2014: "CAMs as Counter Measures Against Infectious & Inflammatory Diseases," "PROJECT 3: Anti-Inflammatory Microbial CAM & Arthritis," NIH/NCCAM P01 AT004986-01. \$1,592,500 for 08/01/08 - 07/31/14 for Project 3; total program project \$6,000,000. D.W. Pascual, Project Leader (Jutila, M.A., Principal Investigator).

Project period August 1, 2008 - July 31, 2013: "CAMs as Counter Measures Against Infectious & Inflammatory Diseases," "Core B: Animal Models Core," NIH/NCCAM P01 AT004986-01. \$1,251,464 for 08/01/08 - 07/31/13. D.W. Pascual, Core Leader (Jutila, M.A., Principal Investigator).

Project period August 1, 2008 - July 31, 2009: "Brucellosis Vaccines, MT," USDA 2008-03776. \$302,799 for 08/01/08 - 07/31/09. D.W. Pascual, Principal Investigator.

Project period September 1, 2007 - May 31, 2009: "CAM Intervention for Rheumatoid Arthritis," NIH-NCCAM 1R21 AT004312. \$385,588 for 09/01/07 - 05/31/09. D. W. Pascual, Principal Investigator.

Project Period May 1, 2007 - April 30, 2008: "Novel Vaccine Platform and Adjuvants for Biodefense" as part of Rocky Mountain Region RCE in Biodefense, NIH-NIAID U54 AI-065357-01. \$100,000 for 05/1/07 - 04/30/08. D.W. Pascual, Project Leader (Belise, J., Principal Investigator).

Project period July 1, 2005 - June 30, 2008: "Brucellosis Vaccines, MT," USDA 2006-06047. \$817,795 for period 07/01/06 - 06/30/08. D.W. Pascual, Principal Investigator.

Project Period June 1, 2005 - April 30, 2009: "Project 4: DNA Vaccines for Q Fever" as part of Rocky Mountain Region RCE in Biodefense, NIH-NIAID U54 AI-065357-01. \$1,075,400 for 06/1/05 - 05/31/09. D.W. Pascual, Project Leader (Belise, J., Principal Investigator).

Project period April 1, 2005 - March 31, 2010: "Mucosal Immunity Elicited by *Salmonella* Vaccine Delivery," NIH-NIAID 2R01 AI-41123. \$1,075,000 for 04/01/05 - 03/31/10. D. W. Pascual, Principal Investigator.

Project period April 1, 2004 - March 31, 2009: "Mucosal Lymphocyte Homing in the Head and Neck," NIH-NIAID R01 AI-55563. \$1,573,200 for 5 years. D. W. Pascual, Principal Investigator.
Project period July 1, 2004 - August 31, 2012: "COBRE: Center for Immunotherapies to Zoonotic Diseases," NIH-NCRR P20 RR-020185. D. W. Pascual, Investigator responsible for \$1,939,298 (10%) of the entire program. (Harmsen, A.G., PI/Quinn, M.A., PI)

1992-2008

Project period July 1, 2004 - June 30, 2008: "Mucosal Vaccines for Plague," NIH-NIAID R01 AI-56286. \$1,306,263 for three years. D.W. Pascual, Principal Investigator.

Project period December 12, 2005 - February 29, 2008: "Surface Modified Nanostructures as Delivery Vehicles for Vaccines," Gates Foundation. \$118,600 for 12/12/05 - 02/29/08; total grant project, \$560,531. María José Alonso Fernández, Principal Investigator, University of Santiago de Compostela, Spain. D.W. Pascual, Project Leader.

Project period December 30, 2003 - December 29, 2008: "Innate Immune Receptors and Adjuvant Discovery," NIH-NIAID Contract N01 AI-40009. D. W. Pascual, Investigator (10% effort). (Jutila, M., PI)

Project period January 1, 2004 - May 30, 2005: "M Cell Delivery Platform of Plague," NIH-NIAID RCE Developmental Award (Univ. of Washington). \$174,463 for 18 months. D.W. Pascual, Principal Investigator.

Project period May 1, 2001 - April 30, 2005: "Mucosal Transgene Vaccination for HIV," NIH-NIAID R01 AI-49071. \$270,875 for 05/01/03 - 04/30/04. \$831,042 for three years. D.W. Pascual, Principal Investigator.

Project period September 1, 2000 - June 30, 2006: "Targeted DNA Delivery for Salivary IgA Responses," NIH-NIDCR R01 DE-13812. \$1,062,500 for five years. D. W. Pascual, Principal Investigator.

Project period July 1, 2001 - June 30, 2005: "Brucellosis Vaccine Delivery for Bison," USDA 2004-06034. \$409,526 for period 07/01/04 - 06/30/05. D.W. Pascual, Principal Investigator.

Project period May 1, 2001 - April 30, 2003: "Vaccines for Livestock *E. coli* Scours and O157:H7," Montana Board of Research and Commercialization Technology. \$400,000 for two years. D.W. Pascual, Principal Investigator.

Project period March 1, 2001 - August 31, 2001: "Microsphere Technology for Brucellosis Vaccine," Montana Department of Livestock. \$50,000 for period 03/1/01 - 08/31/01. D.W. Pascual, Principal Investigator.

Project period January 1, 1999 - December 31, 2001: "Mucosal Immunity Elicited by *Salmonella* Vaccine Delivery," NIH-NIAID R01 AI-41123. \$658,619 total for three years. D. W. Pascual, Principal Investigator.

Project period September 30, 1997 - September 29, 1999: "Directed DNA Immunization of Mucosal Tissues," NIH-NIAID R21 AI 42673. \$365,164 total for two years. D.W. Pascual, Principal Investigator.

Project period October 1, 1999 - September 30, 2001: "Mucosal Immunity to K99 Fimbriae Encoded by *Salmonella*: Vaccine for Bovine ETEC," NRI-CRGP, USDA 9901997. \$175,253 total for 2 years. D.W. Pascual, Principal Investigator.

Project period June 1, 2000 - June 30, 2001: "Brucellosis Vaccine Delivery for Bison," USDA 99-34397. \$397,587 for period 06/01/00 - 06/30/01. D.W. Pascual, Principal Investigator.

Project period June 15, 1999 - June 30, 2000: "Vaccine Delivery Systems for Bison," USDA 9902950. \$140,340 total for one year. D.W. Pascual, Principal Investigator.

Project period May 31, 1996 - May 30, 2001: "Intranasal Gene Transfer for Mucosal Vaccination," NIH-NIAID R01 AI/AR 40288. \$778,708 total for 5 years. D. W. Pascual, Principal Investigator.

Project period October 1, 1996 - September 30, 1999: "Mucosal Immunity to K99 Fimbriae Encoded by *Salmonella*: Vaccine for Bovine ETEC," NRI-CRGP, USDA 9602195. \$141,394 total for 2 years. D.W. Pascual, Principal Investigator.

Project period December 1, 1996 - November 30, 1998: "Attenuation of Virus-Induced Inflammation in CF Therapy," Cystic Fibrosis Foundation. \$200,000 total for 2 years. D.W. Pascual, Principal Investigator.

Project period February 1, 1997 - January 31, 1998: "FACSCalibur Flow Cytometry System," NIH 1 S10 RR11877. \$135,000 total for 1 year. D.W. Pascual, Principal Investigator.

Project period November 1, 1997 - September 30, 1998: "Equipment Grant for an Automated DNA Sequencer," NRI-CRGP, USDA. \$37,552 for period 10/1/96 - 09/30/97. D.W. Pascual, Co-Principal Investigator.

Project period March 1, 1992 - February 28, 1998: "Neuropeptide Regulation of B Lymphocyte Function," FIRST AWARD, NIH-NCI R29 CA 54430. \$350,000 total for 6 years. D. W. Pascual, Principal Investigator.

Project period October 1, 1996 - September 30, 1997: "Equipment Grant for FACSCaliber Cell Sorter," NRI-CRGP, USDA 9603774. \$50,000 for period 10/1/96 - 09/30/97. D.W. Pascual, Principal Investigator.

Project period August 1, 1997 - July 31, 1998: "A Preparative Ultracentrifuge and Rotors for Separation and Analysis of Biological Samples," BIO/IIID/MBE, NSF. \$52,150 for period 08/1/97 - 07/31/98. D.W. Pascual, Co-Principal Investigator.

Project period January 1, 1995 - December 31, 1996: "T Cell Immunity in Ade5-mediated CFTR Gene Therapy," Cystic Fibrosis Foundation application in Gene Therapy in Cystic Fibrosis. \$194,400 total for 2 years. D.W. Pascual, Principal Investigator.

Project period September 30, 1993 - September 29, 1995: "Mucosal Immunity and Cystic Fibrosis," Cystic Fibrosis Foundation. \$100,000 total for 2 years. D. W. Pascual, Principal Investigator.

Project period October 1, 1991 - September 30, 1996: "Mucosal Immunization Research Group," NIH-NIAID-DMID 15128. Provided partial salary support. D. W. Pascual, Co-Investigator.

Project period July 1, 1994 - June 30, 1995: "Immune Suppressor Mechanisms and Hypertension in the Spontaneously Hypertensive Rat," Alabama Affiliate, American Heart Association Grant-in-Aid application. \$30,000 for 07/01/94 - 06/30/95. D.W. Pascual, Principal Investigator.

Project period July 1, 1991 - June 30, 1993: "Correction of Spontaneously Hypertensive Rat T Cell Dysfunction Attenuates Its Hypertension," Grant-in-Aid AL-G-910024, American Heart

Association, Alabama Affiliate. \$45,000 for period 07/1/91 - 06/30/93. D. W. Pascual, Principal Investigator.

Prior to 1992

Project period January, 1991 - March, 1992: Supplement to "Cellular and Molecular Basis for the IgA Response," R01 AI 18958-09. \$328,842 total for 5 years. D. W. Pascual, Minority Investigator.

Project period November, 1990 - October, 1991: "Regulation of B Cell Function by Substance P and Adrenocorticotrophic Hormone Upon B Cell Lymphomas," American Cancer Society Mini-Grant aided by IRG-66-31. \$10,000 for period 11/1/90 - 10/31/91. D. W. Pascual, Principal Investigator.

Project period October, 1988 - August, 1990: NIH Hypertension Training Grant Fellowship. \$5,000 total in research funds. D.W. Pascual, Postdoctoral Fellow.

Pending Support

Project period July 1, 2024 – June 30, 2026: "Attenuation of Sjögren's Syndrome Via Stimulation of Regulatory Cells," NIH/NIDCR 1R01DE033655, \$ 1,906,250 total. D. W. Pascual, Principal Investigator.

Project period July 1, 2024 – June 30, 2026: "B Cell Function & Protection to Brucellosis," NIH/NIAID 1R21AI185422, \$419,375 total. D. W. Pascual, Principal Investigator.

Project period May 1, 2024 – April 30, 2027: "Immunity & in a *Brucella melitensis* Challenge Study in Pregnant Goats," USDA-NRI 2023-07866, \$650,00 total. D. W. Pascual, Principal Investigator.

COMMITTEE RESPONSIBILITIES

Editorial Service

2002-2006 Section Editor, Journal of Immunology

2003-2006 Associate Editor, Mucosal Immunology Update

1998-2002 Associate Editor, Journal of Immunology

1997-1998 Primary Reviewer, Journal of Immunology

1994-2023 Editorial Board, Infection and Immunity

2011-2014 Editorial Board, Polish Food & Nutrition Sciences

2013-present Editor, Microbes & Infection

2014 Editorial Board, Clinical & Vaccine Immunology

2014-2017 Editor, Clinical & Vaccine Immunology

2017-2026 Editor, mSphere

Ad Hoc Reviewer for the Following:

American Journal of Hypertension	-Journal of Immunology
-American Journal of Physiology	-Journal of Infectious Diseases
-Arthritis Research & Therapy	-Journal of Leukocyte Biology
-Arthritis & Rheumatism	-Journal of Neurovirology
-Blood	-Journal of Neuroimmunology
-BMC-Immunology	-Journal of Virology
-BMC-Microbiology	-Journal of Wildlife Diseases
-Clinical and Experimental Immunology	-Microbes & Infection
-Cytokine	-Microbiology -Molecular and Cellular Biology
-European Journal of Immunology	-Molecular Immunology
-Expert Review of Vaccines	-Mucosal Immunology
-FASEB Journal	-Nature-Communications -Nature-Materials
-Frontiers in Immunology	-NPJ Vaccines
-Frontiers in Microbiology	-Oncology Research
-Frontiers in Veterinary Science	-Oral Microbiology & Immunology
-Gene Therapy	-PloS Neglected Tropical Diseases
-Glia	-PloS-ONE
-Human Gene Therapy	-Regional Immunology
-Hypertension	-Rheumatology
-Immunology	-Scientific Reports
-Immunology Letters	-The Proceedings of the National Academy of Sciences, USA
-ImmunoHorizon	-Vaccine
-International Immunology	-Veterinary Immunology and Immunopathology
-Journal of Clinical Microbiology	
-Journal of Clinical Investigation	
-The Journal of Experimental Medicine	
-Journal of Hypertension	

Grant Review Panels

Member, HIV Immunopathogenesis & Vaccine Development (HIVD) Study Section, formerly HIV/AIDS Vaccine (VACC), NIH, 2017-2021.

Member, College of CSR Reviewers, NIH, 2010-2012.

Member, Oral, Dental and Craniofacial Sciences (ODCS) Study Section, NIH, 2006-2010.

Member, Clinical Neuroimmunology and Brain Tumors (formally, Brain Disorders and Clinical Neurosciences-4; BDCN-4) Study Section (CNBT), NIH, 1998 - 2006.

Member, Research Centers in Minority Institutions Review Committee (RCMI), NIH, 2000 - 2004

Chairman, Research Centers in Minority Institutions Review Committee (RCMI), NIH, 2004 – 2005

Ad Hoc Panels

Reviewer, Small Business Innovative Research Study Section, NIH-NIAID, Washington, D.C., December 1993.

Special Reviewer, Allergy, Immunology, and Transplantation Research Committee, NIH-NIAID, 1998.

Reviewer, Shared Instrumentation Grant Committee, ZRG-1, NIH, Washington, D.C., November 1998.

Special Reviewer, Allergy, Immunology, and Transplantation Research Committee, NIH-NIAID, 1999.

Site visit, NIH-NIAID Research Centers in Minority Institutions Review Committee, New York, December, 1999.

Reviewer, NIH-NIAID Research Centers in Minority Institutions Review Committee, Bethesda, MD, February, 2000.

Reviewer, NIH-NIAID Immunobiology and Fellowship Study Section, Bethesda, MD, February, 2000.

Site visit, NIH-NIAID Research Centers in Minority Institutions Review Committee, Ponce, Puerto Rico, March, 2000.

Special Reviewer, Oral Biology and Medicine Study Section, Subcommittee 1, NIH-NIDR, October, 2000.

Reviewer, Integrated Preclinical/Clinical AIDS Vaccine Development Program Study Section, NIH-NIAID, Bethesda, MD, November, 2001.

Reviewer, Special Emphasis Panel, SSS-F1, NIH-NIAID, Bethesda, MD, February, 2002.

Reviewer, Special Emphasis Panel for Oral Mucosa HIV RFAs, Bethesda, MD, March, 2003.

Reviewer, Oral, Dental, and Craniofacial Sciences Study Section, Washington, D.C., February, 2004.

Reviewer, ZRG1 IMM-F (06): Topics in Brain and Gut Immunity Study Section, August 18, 2004.

Reviewer, NIH-NCRR, INBRE, Washington, D.C., March, 2005.

Reviewer, Oral, Dental, and Craniofacial Sciences Study Section, June, 2005.

Reviewer, Intracellular Pathogen Program (ZAI1 QV-I-J2) Study Section, October, 2006.

Reviewer, Pennsylvania Department of Health, January, 2007; Progress Reviewer, 2008.

Reviewer, Cooperative Research Partnerships for Influenza Product Development (ZAI1-CCH-M-M2) Special Emphasis Panel, January 29-30, 2007.

Reviewer, Emerging Infectious Diseases ZAI1-EB-I-(S1) Special Emphasis Panel, May 17, 2007.

Reviewer, Special Emphasis Panel/Scientific Review Group 2007/10 ZRG1 MOSS-A (03), July 2, 2007.

Reviewer, Special Emphasis Panel, ZAI1-TP-M-J1/J2, Cooperative Research Partnerships for Biodefense, October 22-24, 2007.

Reviewer, HIV Vaccine Research and Design (HIVRAD) Program (P01), November 26, 2007.

Reviewer, Cooperative Centers for Translational Research on Human Immunology and Biodefense (U19), ZAI1-KS-1J3 Special Emphasis Panel, November 20-21, 2008.

Chair, ZRG1 MOSS-K (95) R ARRA Competitive Revision Applications, July 28, 2009.

Reviewer, Clinical Neuroimmunology and Brain Tumors 1 (CNBT-1) Study Section, NIH, Oct. 8-9, 2009.

Reviewer, Pennsylvania Department of Health, January, 20, 2010.

Reviewer, Special Emphasis Panel, ZAI1-PA-I-C3, Modeling Immunity for Biodefense, April 6-7, 2010.

Reviewer, Special Emphasis Panel/Scientific Review Group ZRG1 MOSS-B (03) M Meeting, November 17, 2010.

Reviewer, Special Emphasis Panel, ZAI1-BLG-M-M1, Partnerships for Next Generation Biodefense Diagnostics, February 18 & 28, 2011.

Reviewer, Oral Biology Conflicts Special Emphasis Panel ZRG1 MOSS G 02 Meeting, June 22, 2011.

Reviewer, Special Emphasis Panel, ZGM1 PPBC-7 (VD) Meeting, Program Project Review, August 12, 2011.

Reviewer, Immunity and Host Defense (IHD) Study Section, October 6-7, 2011.

Reviewer, Clinical Neuroimmunology and Brain Tumors 1 (CNBT-1) Study Section, NIH, February 16-17, 2012.

Reviewer, Autoimmune and Infectious Diseases Special Emphasis Panel ZRG1 IMM-C(02)M, March 1, 2013.

Reviewer, Cooperative Centers on Human Immunology(U19), ZAI1-LAR-I-J1 Special Emphasis Panel, January 13-15, 2014.

Reviewer, Autoimmune and Infectious Diseases Special Emphasis Panel ZRG1 IMM-C-02M, December 4, 2014.

Reviewer, Mucosal Immunology Studies Team (MIST) Special Emphasis Panel, ZAI1-ALW-I-M1, March 14-15, 2016.

Reviewer, Human Immunology Project Consortium (U19) Special Emphasis Panel, ZAI1-PA-I-S1, July 18-20, 2016.

Reviewer, HIV/AIDS Vaccine (VACC) Study Section, March 14, 2017.

Reviewer, USDA-NIFA: Animal Health & Disease Panel B Team, Oct. 31-Nov. 3, 2017.

Reviewer, ZDE1B18 SEP Meeting-AIDS Applications, February 28, 2018.

Reviewer, Maintaining Immunity after Immunization (U01) Special Emphasis Panel, ZAI1-GEB-I-(S1)1 Meeting, July 11-12, 2018.

Reviewer, Small Business: Immune Responses and Microbial Vaccine Development, ZRG1 AIDC-P (11) Meeting, June 30 - July 1, 2021.

Reviewer, Small Business: Immune Responses and Microbial Vaccine Development, ZRG1 AIDC-P (11) Meeting, November 17-18, 2021.

Reviewer, Small Business: Immune Responses and Microbial Vaccine Development, ZRG1 AIDC-P (11) Meeting, March 16-17, 2022.

Reviewer, Lasker Program Review Special Emphasis Panel, ZRG1 CVRS-S (55) Meeting: December 20, 2022.

Reviewer, Lasker Program Review Special Emphasis Panel, ZRG1 CVRS-S (55) Meeting: December 20, 2022.

Reviewer, Disease Control and Applied Immunology Member Conflict Meeting DCAI(02): July 14, 2023.

Reviewer, Cooperative Centers on Human Immunology(U19), ZAI1-AM-I-J1 Special Emphasis Panel, October 31 - November 2, 2023.

External Reviewer, Veteran's Administration

External Reviewer, NIH-NHLBI

External Reviewer, NSF

External Reviewer, National Academy of Sciences

External Reviewer, USDA NRI-CRGP - 1998, 1999, 2002, 2003, 2005

External Reviewer, North Carolina Biotechnology Center, 2003

External Reviewer, Natural Sciences & Engineering Research Council of Canada, 2003

External Reviewer, The Wellcome Trust, 2008, 2010

External Reviewer, Israel Vaccine Research Initiative, 2008

External Reviewer, The Research Council of Norway, 2008

External Reviewer, Georgia Research Alliance Collaboration, 2009

External Reviewer, National Medical Research Council, Singapore, 2011

External Reviewer, Rocky Mountain Research Center of Excellence for Biodefense and Emerging Infectious Diseases Research, 2011

External Reviewer, Kentucky Science & Engineering Foundation, 2016

NATIONAL COMMITTEE RESPONSIBILITIES

2014 - 2018: AAI Program Committee

2015-2017 National Academy of Science Revisiting Brucellosis in the Greater Yellowstone Area Committee

2021-2024 AAI Finance Committee

2022-2023 AAI Public Communications Committee

INSTITUTIONAL COMMITTEE RESPONSIBILITIES

1996-2004: Member, MSU-IACUC

1996-2000: VMB Alternate for University Governance Council

1996-2000,
2003-2005: Chair, VMB Graduate Core Committee

1997: Co-Chair VMB Faculty Search Committee

1997, 2004: MAES Review Committee

1997: Member, Ph.D. Oversight Committee for the College of Agriculture

2000, 2005: Member, VMB Department Head Search Committee

2000-2005: Chair, VMB Equipment Support Committee

2000-2005: Member, VMB Lecture Series

2001: Chair, Bison and Wildlife Health Center Committee
2003: Chair, VMB Faculty Search Committee

2003: Member, Director of MSU ARC Search Committee

2006: Member, VMB Faculty Search Committee

2007: Chair, VMB Faculty Search Committee

2008: Member, College of Agriculture Promotion and Tenure Committee

2009: Chair, VMB Faculty Search Committee

2010-2012: MSU-AACUC

2010-2012: MSU Research Council

2011: Member, IMID Faculty Search Committee

2014: Member, Univ. of Florida Research Opportunity Seed Fund review panel

2014: Member, College of Veterinary Medicine Focus Group on Graduate Studies - Strategic Planning

2014-2017: Member, CVM Information Technology Committee

2014-2016: Member, CVM Small Animal Internal Medicine (SAIM) Faculty Search Committee

2016-2017: Member, CVM Graduate Studies Committee

2016-2017: Chair, CVM Graduate Studies Committee

2018-present: Ad hoc Member, CVM Graduate Studies Committee

2015-2018: Member, CVM Research Committee

2018-present: Ad hoc Member, CVM Research Committee

2016-2017: Member, CVM Search Committee for ID&I Department Chair

- 2017: Member, CVM Search Committee for Associate Dean of Research & Graduate Studies
- 2018: Member, CVM Faculty Focus Group for Research/Graduate Education Strategic Plan
- 2018-2023: College of Veterinary Medicine Dean's Council
- 2018-2023: UF Associate Deans of Research Committee
- 2018-2023: UF Animal Care Services (ACS) Advisory Committee
- 2018-2023: Ad hoc Member, CVM Graduate Studies Committee
- 2018-2023: Ad hoc Member, CVM Research Committee
- 2019-2022: College of Medicine Search Committee for the Multi-Disciplinary Center for Infectious Diseases Research
- 2022: Member, Executive Dean Search Committee for CVM

PROFESSIONAL SOCIETIES AND CONFERENCES

The American Association of Immunologists/Clinical Immunology Society 1993 Program Planning Committee - Society for Mucosal Immunology Representative

Chairman on "Neuropeptide Regulatory Pathways in Mucosal Immunity and Inflammation Mini-Symposium "at the Joint Meeting of American Association of Immunologists/Clinical Immunology Society, May 21 - 25, 1993, Denver.

Society for Mucosal Immunology Planning Committee for 1994 Federation for American Societies for Experimental Biology Meeting, April 24 -29, 1994, Anaheim.

Co-chairman on "Mucosal Vaccines 4: Th1/Th2, CTL, B Cells, and Antibody Responses" at the 8th International Congress of Mucosal Immunology, July 16 - 20, 1995, San Diego.

Chairman on "Mucosal Vaccines and Host Responses" at the 1998 Experimental Biology Meeting, April 17-25, 1998, San Francisco.

Member, Organizing Committee for "Mucosal Immunology in 21st Century," May 23 - 25, 2001, Orange Beach, Alabama.

Co-chairman on "Bacterial Enterotoxins as Mucosal Immunomodulators," at 102nd General Meeting of American Society of Microbiology, May 19 - 23, 2002, Salt Lake City, Utah.

Co-chairman on "Regulation of Lymphocyte Migration and Tissue Localization," at the Meeting of American Association of Immunologists, May 6 - 10, 2003, Denver.

Co-chairman on "Vaccines and Adjuvants," at the Experimental Biology 2004 Meeting, April 17 - 21, 2004, Washington, D.C.

Society for Mucosal Immunology Planning Committee for The American Association of Immunologists 2007 Meeting.

Chairman on "NALT Horizons," at the 94th Annual Meeting of The American Association of Immunologists, May 18-22, 2007, Miami Beach.

Participant for the "Yellowstone Wildlife Health Program Workshop, June 6-7, 2007, MSU-Bozeman.

2009-2011: Chair, AAI Mucosal and Regional Immunology Block Symposium.

2013: Vice Chair Elect for Brucellosis Research Conference and on Board of Directors and Organizing Committee for the 66th Brucellosis Research Conference, Dec. 7-8, 2013, Chicago, IL.

2014 - 2018: AAI Program Committee

Chair, Session on Immune Responses to Swine and Avian Influenza, Keystone Symposium on "Immunity to Veterinary Pathogens: Informing Vaccine Development," January 20-25, 2015, Keystone, CO.

Chair, Session on Immunologic Mechanisms of Vaccination, 48th Annual Meeting of the Society for Leukocyte Biology, September 27-29, 2015, Raleigh, NC.

2015: Chair for Brucellosis Research Conference and on Board of Directors and Organizing Committee for the 68th Brucellosis Research Conference, Dec. 5-6, 2015, Chicago, IL.

Co-Chair, Session on Molecular Basis for Mucosal Vaccines: Novel Strategies and Mechanisms, American Association of Immunologists, May 13-17, 2016, Seattle, WA.

Co-Chair, Block Symposium on Microbiome, Diet, and Metabolism at the Crossroads of Autoimmune Therapeutics, American Association of Immunologists, May 4-8, 2018, Austin, TX.

Co-Chair, Block Symposium on Cellular and molecular mechanisms of vaccines for enhancing protective immune responses, American Association of Immunologists, May 9-13, 2019, San Diego, CA.

Co-Chair, Block Symposium on Novel nano/microparticles, delivery systems and adjuvants, American Association of Immunologists, May 8-12, 2020, Honolulu, HI.

International

External Referee, Medical Research Council of Canada

Co-chairman on "Neuropeptides and Mucosal Defenses Session" at the 7th International Congress of Mucosal Immunology, August 16 - 19, 1992, Prague, Czechoslovakia.

Co-chairman on "Antigen Presentation and Immune Induction" at the 9th International Congress of Mucosal Immunology, January 27 - 31, 1997, Sydney, Australia.

Member, 13th International Congress of Mucosal Immunology Steering Committee, Tokyo, Japan.

Chairman on "Mucosal Vaccines 1" at 13th Intern. Cong. Mucosal Immunol., July 9-12, 2007, Tokyo, Japan.

Chairman on "Mucosally Induced Oral Tolerance" at 13th Intern. Cong. Mucosal Immunol., July 9-12, 2007, Tokyo, Japan.

Chairman on "Mucosal Vaccines 4" at 13th Intern. Cong. Mucosal Immunol., July 9-12, 2007, Tokyo, Japan.

Chairman on invitation lecture on "New Discoveries Regarding Ag-specific IgA Responses Following Mucosal Immunizations" at 13th Intern. Cong. Mucosal Immunol., July 9-12, 2007, Tokyo, Japan.

Chair Elect for Brucellosis Research Conference and on Board of Directors and Organizing Committee for the 2014 International Brucellosis Research Conference, Sept. 10-12, 2014, Berlin, Germany.

Chair on "Vaccination" at International 2014 Brucellosis Research Conference, Sept. 10-12, 2014, Berlin, Germany.

Chair on “Immunology II” at The 14th Awaji International Forum on Infection and Immunity, Sept. 8-11, 2015, Awaji, Japan.

Chair on “Vaccines” at the International Symposium for Future Mucosal Vaccines: Safeguards and Innovations against Infectious Diseases, March 31 - April 1, 2023, Tokyo, Japan.

HONORS AND AWARDS:

2023 Zoetis Award for Veterinary Research Excellence

2023-2025: Advisory Committee, Chiba University Synergy Institute for Futuristic Mucosal Vaccine Research and Development

H. Kiyono and **D.W. Pascual**, editors, Mucosal Vaccines, 2nd ed., Academic Press, Elsevier, Inc., London, United Kingdom 2020.

2019 Innovations of the Year Award from UF Innovate Tech Licensing of “Honeybee Commensal *Snodgrassella alvi* as a Vaccine Against Pathogenic *Neisseriaceae*,” co-recipient with Dr. Massimo Maddaloni, 2019.

Elected to the Fellowship in the American Academy of Microbiology, 2019.

University Term Professorship Award, 2017-2020

The Society of Phi Zeta, 2013

Montana State University Economic Development Award, 2006

Fellow of the American Heart Association (F.A.H.A.), 2001

Charles & Nora L. Wiley Faculty Award for Meritorious Research, 2000

MSU College of Agriculture Travel Award, 1996

Fellow for Council for High Blood Pressure Research, 1994

AAI Travel Award for the 8th International Congress of Immunology in Budapest, Hungary, August 23-29, 1992.

NRSA Postdoctoral Fellowship in Hypertension, 1988 - 1990

Graduate Student Body President, University of Mississippi Medical Center, 1986-1987

PROFESSIONAL SOCIETY MEMBERSHIP:

American Association for the Advancement of Science, 1990
American Peptide Society, 1990
American Association of Immunologists (Elected 1991)
Federation of American Societies for Experimental Biology (FASEB), 1991
Society for Mucosal Immunology, 1992
Council for High Blood Pressure Research - American Heart Association, 1994
American Society for Microbiology, 1994
Society for Leukocyte Biology, 2012

SYMPOSIA:

Invited Speaker on "Ligand Binding by Murine Monoclonal IgM Antibodies," Fifty-first Annual Meeting of the Mississippi Academy of Sciences, February 25-27, 1987, Jackson, Mississippi

Invited Speaker on "Immune Deficiency in the Pathogenesis of Hypertension in SHR," UAB Hypertension Research Retreat, Perdido Beach Hilton, October 19 - 21, 1990, Orange Beach, Alabama.

Invited Speaker on "Regulation of B Cell Responses by Neuro-peptides," at Birmingham-Hamilton Mucosal Immunobiology Meeting, March 1 - 3, 1991, Destin, Florida.

Invited Speaker on "Regulation of Mucosal B cell Responses by ACTH and Substance P," at the Brain and Immunity Conference, March 25 -27, 1991, Naples, Italy.

Invited Speaker on "Mucosal Cytokine Peptide: Substance P as a Late-Acting Differentiation Factor for Peyer's Patch B Cells," at the 7th International Congress of Mucosal Immunology, August 16 - 19, 1992, Prague, Czechoslovakia.

Invited Speaker on "Substance P Promotes Peyer's Patch B Cell Differentiation via a Th2-Dependent Pathway," at the Joint Meeting of American Association of Immunologists/Clinical Immunology Society, May 21 - 25, 1993, Denver, Colorado.

Invited Speaker on "Mucosal B Cell Immunity and Adenoviral Vector Delivery" at the Williamsburg Conference on Gene Therapy, June 4 - 7, 1995, Williamsburg, Virginia.

Invited Speaker on "Some attenuated recombinant (r) *Salmonella* vaccine vectors are lethal in IFN- γ ^{-/-} gene-disrupted mice: what constitutes safe attenuation?" at the 8th International Congress of Mucosal Immunology, July 16 - 20, 1995, San Diego, California.

Invited Speaker on "Intranasal (i.n.) co-delivery of substance P (SP) with adenoviral vector potentiates nasal lymphocyte IgA and IgG anti-viral and anti-vaccine antibody responses," at the 8th International Congress of Mucosal Immunology, July 16-20, 1995, San Diego, California.

Invited Speaker on "Repeated intratracheal adenoviral gene delivery preferentially stimulates CD4⁺ T cell responses," at the 9th Annual North American Cystic Fibrosis Conference, October 12-15, 1995, Dallas, Texas.

Invited Speaker on "Immunization of Upper and Lower Respiratory tracts Using Adenoviral Gene Delivery Systems," at the American Thoracic Society Pulmonary Mucosa Workshop, June 24-25, 1996, Ann Arbor, Michigan.

Invited Speaker on "Vaccines," at the Vaccine Workshop for Molecular and Cellular Biology of Apicomplexan Protozoa Keystone Symposium, January 7-12, 1997, Park City, Utah.

Invited Speaker on "Oral immunization with an attenuated *Salmonella* vector reduces number of Peyer patch resident macrophages and kills IFN- γ -deficient (GKO) mice: extracellular placement of vaccine antigen on vector rescues macrophages and concomitant survival of GKO mice," at the 9th International Congress of Mucosal Immunology, January 27-31, 1997, Sydney, Australia.

Invited Speaker on "Cytokine-like Action by Neuropeptides on B Cell Lymphomas" at the AIDS Lymphoma Meeting, March 7-9, 1997, Bethesda, Maryland.

Invited Speaker on "Directed DNA Immunization of the Nasal Mucosa Effected by the Addition of a Targeting Molecule" at the NIH/AVRC Workshop, "New Concepts in HIV Vaccine Development," May 3-5, 1999, Bethesda, Maryland.

Invited Speaker on "Th2-Type Responses Are Necessary for Immunity Against Intracellular Pathogens in L-Selectin-Deficient Mice," at the Joint Meeting of American Association of Immunologists/Clinical Immunology Society, May 12 - 16, 2000, Seattle, Washington.

Invited Speaker on "Addressins and Homing to Mammary Glands," at Wyeth Nutritionals International, May 18, 2001, Philadelphia, Pennsylvania.

Panel Member on "Novel Approaches for the Development of Mucosal Vaccines" at Mucosal Immunology in 21st Century Meeting, May 23 - 25, 2001, Orange Beach, Alabama.

Invited Speaker on "Veterinary Application of DNA Vaccines" at Montana Veterinary Medical Association, June 23, 2001, Bozeman, Montana.

Invited Speaker on "Attenuation of *Salmonella*-Induced Inflammation: Fimbriae Reduce Proinflammatory Cytokines and Prevent Neutrophil Influx into the Peyer's Patches" for Block Symposium, Innate Immune Response to Pathogens, Experimental Biology Meeting, April 19 - 24, 2002, New Orleans, LA.

Invited Speaker on "Cell Trafficking Via the Common Mucosal Immune System: Redefined by Route of Cholera Toxin Immunization" for symposium entitled, "Bacterial Enterotoxins as Mucosal Immunomodulators," at 102nd General Meeting of American Society of Microbiology, May, 2002, Salt Lake City, Utah.

Invited Speaker on "Attenuation of *Salmonella*-Induced Inflammation: Colonization Factor Antigen I (CFA/I) Prevents Chemokine Induction for Support of Th2-Type Responses" for symposium entitled, "Innate Defenses in the Host-Pathogen Equation," at 11th International Congress of Mucosal Immunology, June 16 - 20, 2002, Orlando, FL.

Invited Speaker on "Segregation in Mucosal Effector Responses as a Consequence of Route of Immunization and Homing Receptor Usage" for symposium entitled, "Mucosal B Cell Migration," at 11th International Congress of Mucosal Immunology, June 16 - 20, 2002, Orlando, FL.

Invited Speaker on "Brucellosis Vaccine Development at Montana State University," 2004 Annual Meeting of Greater Yellowstone Interagency Brucellosis Committee, January 13, 2004, Bozeman, MT.

Invited Speaker on "Nonintestinal B Cell Trafficking," for International Symposium on "Innate and Adaptive Immunity After Transcutaneous or Mucosal Vaccination" June 15 - 18, 2004, at Foundation Merieux Conference Center, Veyrier-du-Lac, France.

Invited Speaker on "Anti-Inflammatory Vaccination Using a *Salmonella* Vaccine Vector," August 30 - September 2, 2004, for 4th International Forum on Infection and Immunity, Awaji Island, Japan.

Invited Speaker on "Selective Loss of Respiratory Plasmacytoid CD8⁺ Dendritic Cells (DC) in L-Selectin^{-/-} (L-Sel^{-/-}) Mice: CD8⁻ DC Confer Tolerance to Viral Vector" for Block Symposium, Immunoregulation at Mucosal Surfaces, Experimental Biology Meeting, April 1 - 6, 2005, San Diego, CA.

Invited Speaker on "Mucosal Immunity of Vaccine Delivery" for Chonbuk National University Symposium, June 14, 2005, Korea.

Invited Speaker on “Oral Vaccines for Enteric Diseases and Autoimmunity” for International Vaccine Institute, June 15, 2005, Seoul, Korea.

Invited Speaker on “Mucosal Vaccine Targeting Circumvents the Use of Adjuvant for Development of Mucosal Immunity to Botulinum Neurotoxin A (BoNT/A).” 12th International Congress of Mucosal Immunology, June 27-30, 2005, Boston, MA.

Invited Participant for Brucellosis Vaccine and Diagnostics Workshop, August 16-18, 2005, Laramie, WY.

Invited Speaker on “*Salmonella* Vaccine Therapy for Autoimmunity” for Northwest Branch of ASM, March 10-12, 2006, Seattle, WA.

Invited Speaker on “Vaccine Delivery Systems and Vaccines for Brucellosis” for the Montana Academy of Sciences, April 7, 2006, Butte, MT.

Invited Speaker on “Anti-Inflammatory *Salmonella* Vaccine Therapy Elicits Regulatory T Cells and Protects Against Autoimmunity Independent of Autoantigen” for 2nd ASM Conference on *Salmonella*: Pathogenesis to Therapeutics, September 9-13, 2006, Victoria, British Columbia, Canada.

Invited Speaker on “Vaccines for Q Fever” for Vaccines - Bacteria and Toxins Breakout Session II at the 4th Annual NIAID RCE Research Meeting, April 15-17, 2007, St. Louis, MO.

Invited Speaker on “Needle-free Immunization for Biodefense” for Guest Society Symposium, “NALT Horizons” at 94th Annual Meeting of The American Association of Immunologists, May 18-22, 2007, Miami Beach, FL.

Invited Speaker on “Adaptor Molecules for Mucosal Immunization or Tolerance” for Keynote Lecture 3, “Recent Progression of an Oral Vaccine” at 13th Intern. Cong. Mucosal Immunol., July 9-12, 2007, Tokyo, Japan.

Invited Speaker on “DNA Vaccines: They Protect Against Brucellosis” for the keynote presentation for “Intracellular Bacteria Workshop Analysis of Antigens of Intracellular Bacteria for Biodefense Research,” January 25, 2008, Galveston, TX.

Invited Speaker on “Regulatory T Cell Vaccination in the Absence of Auto-Antigen” for NIAID Workshop on “Immune Defense Mechanisms at the Mucosal Surface,” January 29-30, 2008, Bethesda, MD.

Invited Speaker on “Alternative Routes of Vaccine Delivery: Drink or Inhale?” for Bioterrorism/Emerging Infections Conference, March 26, 2008, Bozeman, MT.

Invited Speaker on “Vaccine Strategies for Microbial Diseases” for the Peruvian Ministry of Health Meeting on “Developing a Vaccine for the Prevention of Carrion's Disease or Human Bartonellosis for the Andean Region,” June 22-26, 2008, Lima, Peru.

Invited Speaker on “Alternative Properties of ETEC CFA/I Fimbriae” for 2008 ETEC Retreat, August 15-18, 2008, Rapid City, South Dakota.

Invited Guest to discuss brucellosis on the PBS TV program, Montana Ag Live, May 17, 2009.

Invited Speaker on “DNA and Live Brucellosis Vaccines for Wildlife” for Brucellosis Research Meeting, July 30-31, 2009.

Invited Participant for Brucellosis Research Consortium: Science Advisory Team Meeting, September 16-18, 2009, Denver, CO.

Invited Speaker on “Next Generation Brucellosis Vaccines” for Leadership Montana & Leadership MSU Joint Session, November 18, 2009, Bozeman, MT.

Invited Speaker on “Mucosal Vaccines for Infectious and Autoimmune Diseases,” NIAID/Intermountain West Immunology Group (IWIG) Workshop, August 5-6, 2010, Hamilton, MT.

Invited Speaker on “Oral Immunization with $\Delta znuA$ *Brucella melitensis* Mutant Protects Against Nasal *B. melitensis* Challenge,” 4th Vaccine and ISV Annual Global Congress, Vienna, Austria, October 3-5, 2010.

Invited Speaker on “Mucosal Tolerance Dependent upon Natural Killer (NK) Cells to Resolve Myelin Oligodendrocyte Glycoprotein (MOG)-induced Experimental Autoimmune Encephalomyelitis (EAE) by Recruiting Regulatory T (T_{reg}) Cells into the CNS” for “Regulatory T Cells” at 15th Intern. Cong. Mucosal Immunol., July 5-9, 2011, Paris, France.

Invited Speaker on “Mucosal Tolerance Therapeutic Stimulates Potent Regulatory B Cells for Protection in a BTLA-Dependent Fashion against Myelin Oligodendrocyte Glycoprotein (MOG)-Induced Experimental Autoimmune Encephalomyelitis (EAE).” 45th Annual Meeting of the Society of Leukocyte Biology, Oct. 28-30, 2012, Maui, Hawai'i.

Invited Speaker on “Disease Suppression: Vaccination.” Bison Brucellosis Workshop, Feb. 27, 2013, Chico Hot Springs, MT.

Invited Speaker on “Mucosal Vaccination Protects Against Pulmonary and Systemic Brucellosis.” Cold Spring Harbor Asia Meeting on “Vaccine Design, “ June 3-7, 2013, Suzhou, China.

Invited Speaker on “Novel Adhesin-Based Mucosal Vaccines for Treating Autoimmunity.” 1st International Symposium on Mucosal Immunity and Vaccine Development, October 20-21, 2014, Tokyo, Japan.

Invited Speaker on “Mucosal Vaccines for Brucellosis.” Keystone Symposium on “Immunity to Veterinary Pathogens: Informing Vaccine Development,” January 20-25, 2015, Keystone, CO.

Invited Speaker on “Nasal Vaccination Induces Innate Lymphoid Cells (ILC1s) and NK cells to Initiate the Lung IFN- γ Cascade That Supports Adaptive T Cell Responses to *Brucella*” at 17th Intern. Cong. Mucosal Immunol., July 14-18, 2015, Berlin, Germany.

Invited Speaker on “Varied Innate Cell Responses in the Lungs Following Live Vector Vaccination or Wild-Type *Brucella* Infection” The 14th Awaji International Forum on Infection and Immunity, September 8-11, 2015, Awaji Island, Japan.

Invited Speaker on “Defining How to Vaccinate for Infection or Autoimmunity,” 48th Annual Meeting of The Society for Leukocyte Biology on “Immunity in Health & Disease” session on “Immunologic Mechanisms of Vaccination,” September 27-29, 2015, Raleigh, NC.

Invited Speaker on “Mucosal Vaccination Activates CD8⁺ T Cells for Protection to Pulmonary *Brucella* Infections,” 2016 ASM Biodefense and Emerging Pathogens Meeting session on “Vaccine-Induced T Cell Immunity to Biodefense Pathogens,” February 8-10, 2016, Arlington, VA.

Invited Speaker on “Mucosal Vaccination Strategies for Protection to Brucellosis,” Hilleman Vaccine Symposium, April 22-23, 2016, Bozeman, MT.

Invited Speaker on “Alternative Immune Mechanisms for Protection against Brucellosis,” for American Association of Veterinary Immunologists Mini-Symposium on “Immunity to Chronic Bacterial Infections” at 98th Annual Meeting of the Conference of Research Workers in Animal Diseases (CRWAD), December 3 -5, 2017, Chicago, IL.

Invited Speaker on "Stimulation of Mucosal CD8⁺ T Cells as an Alternate Strategy for Rendering Protection against Brucellosis," for 3rd Annual Chiba University-UCSD Symposium on Mucosal Immunology, Allergy and Vaccines: Impact on Mucosal Diseases and Global Health, February 13-15, 2019, San Diego, CA.

Invited Speaker on "Brucellosis: Pathogenesis & Vaccine Development," for 2020 UF-Global Biothreat Research Symposium, March 12, 2020, Gainesville, FL.

Invited Speaker (on behalf of Dr. B. Ella) on "Live Attenuated *Brucella* Mutant Stimulates IL-22-mediated Antimicrobial Peptides Following Infection," 73rd Annual Brucellosis Research Conference, Dec. 4-5, 2021, Chicago, IL.

Invited Speaker on "Intracellular *Brucella* Mutant Sensing by Lung Myeloid Cells Mediates Protection." 55th Annual Meeting of the Society of Leukocyte Biology, Oct. 26-29, 2022, Big Island, Hawai'i.

Invited Speaker on "Treating Autoimmunity Independently of Auto-Antigen," International Symposium for Future Mucosal Vaccines: Safeguards and Innovations against Infectious Diseases, March 31 - April 1, 2023, Tokyo, Japan.

Invited Speaker on "Nasal Vaccination Once with a *B. abortus* Mutant Confers Potent Protection Against Pulmonary Challenge with Virulent *B. abortus* 2308," 75th Annual Brucellosis Research Conference, May 20-21, 2023, Blacksburg, VA.

DEPARTMENT OF COLLOQUIA AND SEMINARS:

University of Alabama at Birmingham, Hypertension Program of the Division of Cardiovascular Disease, 1988; "Substance P Receptors on Lymphocytes."

University of Alabama at Birmingham, Hypertension Program of the Division of Cardiovascular Disease, 1989; "Anti-peptide Antibodies Recognize Substance P Receptor and Anti-substance P Antibodies."

University of Alabama at Birmingham, Hypertension Program of the Division of Cardiovascular Disease, 1990; "Substance P and Immune Function."

University of Alabama at Birmingham, Oral Biology Research Conference, January 15, 1991; "The Role of Substance P as a Late-acting B Cell Differentiation Factor."

University of Alabama at Birmingham, Hypertension Program of the Division of Cardiovascular Disease, May 31, 1991; "The Potential of Immune Intervention for the Attenuation of Hypertension in the SHR."

University of Alabama at Birmingham, Hypertension Program of the Division of Cardiovascular Disease, May 15, 1992; "Immune Depression in the Spontaneously Hypertensive Rat Is Linked to Macrophage-Derived Nitric Oxide."

University of Iowa Medical Center, Department of Microbiology, July 23, 1993; "Extra-Immune Regulation of Th1 and Th2 Responses and its Implications in the Spontaneously Hypertensive Rat."

University of Alabama at Birmingham, Hypertension Program of the Division of Cardiovascular Disease, September 10, 1993; "Regulation of Th1 and Th2 Responses in the SHR."

University of Alabama at Birmingham, Department of Microbiology, February 7, 1995; "Induction of Mucosal T Cell Responses Following Live Vector Vaccine Delivery."

Montana State University, Veterinary Molecular Biology, February 17, 1995; "Mucosal Delivery Systems: Implications for Next Generation Vaccines and Gene Therapy."

University of Florida, Department of Pathology and Laboratory Science, February 24, 1995; "Live Vector Delivery Systems for Vaccines and Gene Therapy: Induction of Mucosal Immune Responses."

St. Louis University, Department of Molecular Microbiology and Immunology, March 9, 1995; "Live Vector Delivery Systems for Vaccines and Gene Therapy: Induction of Mucosal Immune Responses."

University of Maryland at Baltimore, Center for Vaccine Development, June 20, 1995; "Live Vector Delivery Systems for Vaccines and Gene Therapy: Induction of Mucosal Immune Responses."

Montana State University, Veterinary Molecular Biology, April 23, 1996; "Live Vector Delivery Systems for Vaccination and Gene Therapy."

Montana State University, Department of Microbiology, March 14, 1997; "Vaccine Targeting to Mucosal Inductive Tissues."

Montana State University, Veterinary Molecular Biology, September 30, 1997; "Repeated Intratracheal Adenovirus Delivery Impairs CTL Responses to Adenovirus."

University of Minnesota, Department of Veterinary Pathobiology, April 12, 2000; "*Salmonella* as a Th2 Vaccine Vector."

Montana State University, Department of Microbiology, February 16, 2001: "The Common Mucosal Immune System: More Common Than Mucosal."

Montana Board of Livestock, May 7, 2001: "DNA Vaccines for *Brucella*."

University of North Carolina-Charlotte, Department of Biology, October 30, 2001: "The Common Mucosal Immune System and Lymphocyte Homing: Where Is Home?"

University of Virginia, Beirne B. Carter Center for Immunology Research, April 29, 2002: "*Salmonella* as a Th2 Vaccine Vector."

Montana State University, Veterinary Molecular Biology, January 9, 2003; "Compartmentalization of Vaccines Within *Salmonella* Vectors."

Montana State University, Veterinary Molecular Biology, September 30, 2003; "Mucosal Immunity: How Do We Get There?"

University of Toyko, Department of Microbiology and Immunology, The Institute of Medical Science, September 3, 2004; "Modified M Cell Ligand, Reovirus Protein $\sigma 1$, Effectively Induces Enhanced Mucosal IgA Responses."

University of Alabama at Birmingham, Department of Pediatric Dentistry, December 13, 2004: "Targeted Vaccine Delivery: Mucosal Immunity Made Possible."

International Vaccine Institute, Seoul, Korea, June 15, 2005, "Oral Vaccines for Enteric Diseases and Autoimmunity."

University of Newcastle, Newcastle, Australia, August 2, 2005, "Shaping the Host With Mucosal Vaccines for Disease or Autoimmunity."

University of Pennsylvania, Zoonotic Disease Seminar Series, March 27, 2006, "Mucosal Aspects to Zoonotic Diseases."

University of Oklahoma Health Sciences Center, Department of Microbiology & Immunology, September 18, 2006, “*Salmonella* Vaccine Therapy for Autoimmunity.”

Loyola University, Department of Microbiology & Immunology, September 27, 2007, “Mucosally Targeted Vaccines for EAE: Dependent and Independent of Myelin Antigens.”

University of Washington, Department of Immunology, October 20, 2008, “Single Dose Tolerance and Immunotherapy.”

Northwestern University Feinberg School of Medicine, Division of Allergy-Immunology, February 20, 2009, “Apoptotic Immunotherapy for Autoimmunity.”

Case Western Reserve University School of Medicine, Department of Pathology, November 10, 2009, “Apoptotic and IL-35 Immunotherapy for Autoimmunity.”

Dartmouth Medical School, Department of Microbiology, May 26, 2010, “Antigen-Dependent and -Independent Therapeutics for EAE and Arthritis.”

University of Florida, Emerging Pathogens Institute, December 1, 2011, “Translational Vaccines for Biodefense and Autoimmunity.”

Montana State University, Department of Immunology & Infectious Diseases, December 6, 2011; “Licensing Immunity to Autoimmune & Infectious Diseases Following Mucosal Vaccination.”

University of Florida, Department of Infectious Diseases & Pathology, February 22, 2012; “Mucosal Vaccine Targeting: Enhanced Efficacy Against Brucellosis and Collagen II-induced Arthritis.”

University of Florida, Research in Progress Seminar of Division of Rheumatology and Clinical Immunology, January 30, 2013; “Antigen-Independent Mucosal Approaches for Treating Collagen-Induced Arthritis.”

University of Florida, EPI External/Internal Advisory Committee, February 15, 2013; “Mucosal Vaccines for Brucellosis.”

University of Texas Health Science Center at Houston, Department of Pathology and Laboratory Medicine, March 1, 2013; “Mucosal Therapeutics for Autoimmunity.”

University of Florida, Department of Animal Sciences, April 12, 2013; “Mucosal Vaccination Approaches for Brucellosis.”

University of Florida, Department of Oral Biology, Sept. 30, 2013; “Mucosal Therapeutics for Autoimmune Diseases.”

University of Florida, Center of Inflammation and Mucosal Immunology, Oct. 19, 2013; “Regulatory B Cells Activate Anergic Regulatory T Cells for Protection Against Experimental Autoimmune Encephalomyelitis (EAE).”

University of Florida, Department of Physiological Sciences, March 11, 2014; “Vaccination Approaches for Brucellosis.”

University of Missouri, Department of Veterinary Pathobiology, Oct. 15, 2014: “Tolerance Inducer, Protein Sigma One, Orchestrates Varied Regulatory Cells to Mitigate EAE.”

University of Florida, Department of Microbiology and Cell Science, December 12, 2016; “Alternate Pathway to Protection: Stimulation of CD8⁺ T Cells for Brucellosis.”

University of Florida, College of Veterinary Medicine, March 25, 2019, “Mucosal Tolerance & Immunity as Tools for Translational Medicine.”

University of Florida, Division of Infectious Diseases & Global Health, February 28, 2020, “CD8⁺ T Cells Can Protect Against Pulmonary *Brucella* Infection.”

University of Florida, CTSI Translational Science of COVID Seminar Series, November 2, 2020, “Mucosal Targeting of COVID-19 Spike Immunogen.”

University of Florida, Animal Molecular & Cellular Biology (AMCB) Program, February 5, 2021, “Mucosal Vaccines and Immunity to Brucellosis.”

University of Florida, “An *E. coli* Adhesin Mediates Bystander Tolerance for the Treatment of Arthritis and Sjögren’s Syndrome,” UF College of Medicine Rheumatology Grand Rounds, April 9, 2021.

University of Florida, Department of Infectious Diseases & Immunology, December 6, 2022, “Anti-Viral Immune Pathways Contribute to Protection Against *Brucella* Infection.”

University of Wyoming, Department of Veterinary Science, April 6, 2023, “Challenges & Solutions for Improved Brucellosis Vaccines.”

PATENTS:

Patent Number **7,910,113** issued March 27, 2011 for **“Tolerizing Agents.”** Described herein is the development of fusion proteins useful for inducing tolerance in a subject. In particular embodiments, the tolerizing agents are useful for influence autoimmune, inflammatory, and/or allergic reactions. Example tolerizing fusion proteins contain a targeting portion (which delivers the fusion protein) and a toleragen or allergen or other antigen to which tolerance is desired in a subject. In particular examples, it is demonstrated that a **protein signal fusion protein**, when administered orally, facilitates systemic and mucosal tolerance. Also described is the nasal delivery of fusion proteins, for instance for restoring immunogenicity.

Patent Number **9,452,205** issued September 27, 2016 for **“Recombinant *Lactococcus lactis* Expressing *Escherichia coli* Colonization Factor Antigen I (CFA/I) Fimbriae and Their Methods of Use.”** Inventors: Pascual, David W., and Maddaloni, Massimo. Described herein is the development of of a broad spectrum therapeutic to treat autoimmune diseases without prior knowledge of the auto-antigen. CFA/I fimbriae stimulate the induction of regulatory T cells to produce IL-10, IL-35, and TGF- β , and has been shown to diminish autoimmune disease in arthritis, experimental autoimmune encephalomyelitis, and Sjögren’s Syndrome.

Patent Number **9,931,390** issued April 3, 2018 for **“Recombinant *Lactococcus lactis* Expressing *Escherichia coli* Colonization Factor Antigen I (CFA/I) Fimbriae and Their Methods of Use.”** Inventors: Pascual, David W., Maddaloni, Massimo, and Montana State University. Described herein is the development of of a broad spectrum therapeutic to treat autoimmune diseases without prior knowledge of the auto-antigen. CFA/I fimbriae stimulate the induction of regulatory T cells to produce IL-10, IL-35, and TGF- β , and has been shown to diminish autoimmune disease in arthritis, experimental autoimmune encephalomyelitis, and Sjögren’s Syndrome.

U.S. Provisional Patent Application Serial No. 17/431,281 filed on February 14, 2019 for **“HONEYBEE COMMENSAL *SNODGRASSELLA ALVI* VACCINE AGAINST PATHOGENIC NEISSERIACEAE.”** Inventors: Massimo Maddaloni, David W. Pascual, and the University of Florida. Described herein is the application of the honeybee commensal, *S. alvi*. as a vaccine for *Neisseria* pathogens.

Submission pending to US Patent Office entitled, **“*E. coli* CfaE Tip Protein Exhibits Anti-Inflammatory Properties for the Treatment of Autoimmunity.”** David W. Pascual, Massimo Maddaloni, Gary Fanger, Neil Fanger, and the University of Florida. Described herein is the application of *E. coli* CfaE tip protein when used to treat autoimmune diseases. CfaE has similar immunomodulatory properties as intact CFA/I fimbriae, and shows similar capacity to act as anti-inflammatory therapeutic for treating autoimmunity.

Abstracts

Published 199 abstracts for meetings - two for 2023.

PUBLICATIONS:

1. Frank, L., Neriishi, K., Sio, R., and **Pascual, D.** 1982. Protection from paraquat-induced lung damage and lethality in (adult) rats pretreated with clofibrate. *Toxicol. Appl. Pharmacol.* 66:269-277.
2. **Pascual, D.W.** 1986. Ligand binding by murine monoclonal IgM antibodies. Master's thesis. Univ. of Miss. Med. Ctr.
3. Garrett, L.R., **Pascual, D.W.**, Clem, L.W., and Cuchens, M. 1987. Conformational changes in the DNA of hybridoma cells from pristane treated mice. *Chem.-Biol. Interactions* 61:249-263.
4. **Pascual, D.W.** 1987. Ligand binding by proteolytic fragments derived from monoclonal IgM antibodies. Doctoral dissertation. Univ. of Miss. Med. Ctr.
5. **Pascual, D.** and Clem, L.W. 1988. Ligand binding by murine IgM antibodies: Intramolecular heterogeneity exists in certain, but not all, cases. *Mol. Immunol.* 25:87-94.
6. Bost, K.L. and **Pascual, D.W.** 1988. Antibodies against a peptide sequence within the HIV envelope protein crossreacts with human interleukin-2. *Immunol. Invest.* 17:577-586.
7. **Pascual, D.W.** and Bost, K.L. 1989. Anti-peptide antibodies recognize anti-substance P antibodies in an idiotypic fashion. *Peptide Research* 2:207-212.
8. **Pascual, D.W.**, Blalock, J.E., and Bost, K.L. 1989. Anti-peptide antibodies which recognize a lymphocyte substance P receptor. *J. Immunol.* 143:3697-3702.
9. **Pascual, D.W.** and Bost, K.L. 1990. A pair of peptides encoded by the same RNA but read in the 5'-3' or 3'-5' direction are antigenically similar as determined using monoclonal antibodies. *Peptides: Chemistry, Structure, and Biology*, J.E. Rivier and G.R. Marshall, ed., ESCOM Science, Leiden, Netherlands, pp. 740-741.
10. **Pascual, D.W.** and Bost, K.L. 1990. Substance P production by P388D1 macrophages: a possible autocrine function for this neuropeptide. *Immunology* 71:52-56.
11. **Pascual, D.W.**, Jin, H., Bost, K.L., and Oparil, S. 1990. Interleukin-2 does not attenuate hypertension in spontaneously hypertensive rats. *Hypertension* 16:468-471.

12. **Pascual, D.W.** and Bost, K.L. 1990. 5'-3' and 3'-5' translation of the same RNA results in hydropathically similar peptides that are antigenically related. *Immunol. Invest.* 19:421-433.
13. Bost, K.L., Clarke, B.L., Xu, J., Kiyono, H., McGhee, J., and **Pascual, D.W.** 1990. Modulation of IgM secretion and heavy chain mRNA expression in CH12.LX.C4.5F5 B cells by adrenocorticotrophic hormone. *J. Immunol.* 145:4326-4331.
14. **Pascual, D.W.**, Xu-Amano, J., Kiyono, H., McGhee, J., and Bost, K.L. 1991. Substance P acts directly upon cloned B lymphoma cells to enhance IgA and IgM production. *J. Immunol.* 146:2130-2136.
15. van Ginkel, F.W., **Pascual, D.W.**, and Clem, L.W. 1991. Proteolytic fragmentation of channel catfish antibodies. *Develop. Comp. Immunol.* 15:41-51.
16. McGhee, J.R., Beagley, K.W., Fujihashi, K., Taguchi, T., **Pascual, D.W.**, Bost, K.L., Xu, J., Lue, C., Aicher, W.K., McGee, D.W., Eldridge, J.H., Mestecky, J., and Kiyono, H. 1991. T helper subsets, cytokines, growth factors, and neuropeptides which regulate the mucosal immune system. In *Frontiers of Mucosal Immunology Vol. I*, Tsuchiya et al. (eds), Elsevier, Excerpta medica, Amsterdam pp. 75-82.
17. **Pascual, D.W.**, Bost, K.L., Xu-Amano, J., Kiyono, H., and McGhee, J.R. 1991. The regulation of antibody responses by mini-cytokines. *Acta Neurologica* 13:343-349.
18. **Pascual, D.W.**, McGhee, J.R., Kiyono, H., and Bost, K.L. 1991. Neuroimmune modulation of lymphocyte function: I. Substance P enhances immunoglobulin synthesis in LPS activated murine splenic B cell cultures. *Inter. Immunol.* 3:1223-1229.
19. Pascual, V. H., Oparil, S., Eldridge, J. H., Jin, H., Bost, K. L., and **Pascual, D. W.** 1992. Spontaneously hypertensive rat: lymphoid depression is age-dependent and mediated via a mononuclear cell subpopulation. *Amer. J. Physiol.* 262:R1-R7.
20. **Pascual, D. W.** and Clem, L.W. 1992. Low temperature pepsin proteolysis: An effective procedure for mouse IgM F(ab')₂ fragment production. *J. Immunol. Methods* 146:249-255.
21. Bost, K.L. and **Pascual, D.W.** 1992. Substance P: A late-acting B lymphocyte differentiation factor. *Amer. J. Physiol.* 262: C537-C545.

22. **Pascual, D.W.**, Bost, K.L., Xu-Amano, J., Kiyono, H., and McGhee, J.R. 1992. The cytokine-like action of substance P upon B cell differentiation. *Regional Immunol.* 4:100-104.
23. Bost, K.L., Breeding, S.A.L., and **Pascual, D.W.** 1992. Modulation of the mRNAs encoding substance P and its receptor in rat macrophages by LPS. *Regional Immunol.* 4:105-112.
24. **Pascual, D. W.**, Pascual, V. H., Bost, K. L., McGhee, J. R. and Oparil, S. 1993. Nitric oxide mediates immune dysfunction in the spontaneously hypertensive rat. *Hypertension* 21:185-194.
25. **Pascual, D. W.**, Stanisiz, A. M., and Bost, K. L. 1994. Functional aspects of the peptidergic circuit to mucosal immunity. *Cellular Basis of Mucosal Immunity, Section B: Cells, Regulation and Specificity in the Mucosal Immune System Inductive Sites*, P. L. Orga, J. Mestecky, M. E. Lamm, W. Strober, J. R. McGhee, and J. Bienenstock, ed., Academic Press, Inc., San Diego, CA, Chap. 17., pp. 203-216.
26. **Pascual, D. W.**, Kiyono, H., and McGhee, J. R. 1994. The enteric nervous and immune systems: interactions for mucosal immunity and inflammation. *ImmunoMethods* 5:56-72.
27. van Ginkel, F. W., Liu, C.-G., Simecka, J., Dong, J.-Y., Greenway, T., Frizzell, R. A., Kiyono, H., McGhee, J. R., and **Pascual, D. W.** 1995. Intratracheal gene delivery with adenoviral vector induces elevated systemic IgG and mucosal IgA antibodies to adenovirus and β -galactosidase. *Human Gene Therapy* 6:895-903.
28. Wu, Shaoguang, Fouts, T.R., **Pascual, D.W.**, Van Cott, J., McGhee, J., Lewis, G.K., and Hone, D.M. 1995. Progress toward an effective live oral attenuated *Salmonella*-human Immunodeficiency virus vector vaccine. *Vaccines95: Molecular Approaches to the Control of Infectious Diseases*, CSH Press, CSH, NY, pp. 281-285.
29. **Pascual, D.W.**, Beagley, K.W., Kiyono, H., and McGhee, J.R. 1995. Substance P promotes Peyer's patch and splenic B cell differentiation. *Advances in Mucosal Immunology*, J. Mestecky et al., eds., Plenum Press, New York, pp 55-59.
30. Wu, S., **Pascual, D.W.**, VanCott, J.L., McGhee, J.R., Maneval, D.R. Jr., Levine, M.M., and Hone, D.M. 1995. Immune responses to novel *Escherichia coli* and *Salmonella typhimurium* vectors that express colonization factor antigen I (CFA/I) of enterotoxigenic *E. coli* in the absence of the CFA/I positive regulator *cfaR*. *Infect. Immun.* 63:4933-4938.

31. VanCott, J.L., Staats, H.F., **Pascual, D.W.**, Roberts, M., Chatfield, S.N., Yamamoto, M., Carter, P.B., Kiyono, H., and McGhee, J.R. 1996. Regulation of mucosal and systemic antibody responses by T helper cell subsets, macrophages, and derived cytokines following oral immunization with live recombinant *Salmonella*. *J. Immunol.* 156:1504-1514.
32. **Pascual, D. W.**, Kiyono, H., and McGhee, J. R. 1996. Mucosal immunity: molecular and cellular aspects of immune protection to enteric infections. Enteric Infections and Immune Responses, L. P. Paradise, M. Bendinelli, and H. Friedman, ed., Plenum Publishing Corp., New York, N.Y., Chap. 2, pp. 15-35.
33. Hone, D.M., Wu, S., Powell, R.J., **Pascual, D.W.**, VanCott, J., McGhee, J.R., Fouts, T.R., Tuskan, R.G., and Lewis, G.K. 1996. Optimization of live oral *Salmonella*-HIV-1 vaccine vectors for the introduction of HIV-specific mucosal and systemic immune responses. *J. Biotech.* 44:203-207.
34. Dong, J.-Y., Wang, D., van Ginkel, F. W., **Pascual, D. W.**, and Frizzell, R. A. 1996. Systematic analysis of repeated gene delivery into animal lungs with recombinant adenoviral vector. *Human Gene Therapy* 7:319-331.
35. van Ginkel, F.W. and **Pascual, D. W.** 1996. Recognition of neurokinin-1 receptor (NK1-R): antibody to a peptide sequence from the third extracellular region binds to brain NK1-R. *J. Neuroimmunol.* 67:49-58.
36. Marinaro, M., Kiyono, H., VanCott, J.L., Okahashi, N., van Ginkel, F.W., **Pascual, D.W.**, Ban, E., Jackson, R.J., Staats, H., and McGhee, J.R. 1996. Vaccines for selective induction of helper Th1 and Th2 cell responses and their roles for mucosal immunity. Essentials of Mucosal Immunology, M. Kagnoff and H. Kiyono, eds., Academic Press, Inc., San Diego, CA, Chap. 33, pp.461-475.
37. **Pascual, D.W.**, Powell R., Lewis G.K., and Hone, D.M. 1997. Oral bacterial vaccine vectors for the delivery of subunit and nucleic acid vaccines to the organized lymphoid tissue of the intestine. *Behring Inst. Mitt.* 98:1-10.
38. **Pascual, D.W.**, Kiyono, H., and McGhee, J.R. 1997. Mucosal vaccine design for enteric infectious agents. In Designer Vaccines: Principles for Successful Prophylaxis, H.P.A. Hughes and M. Campos, eds., CRC Press, Boca Raton, FL., Chap. 6, pp. 101-124.

39. Lakkis, F.G., Cruet, E.N., Nassar, G.M., Badr, K.F., and **Pascual, D.W.** 1997. Expression of recombinant rat interleukin-13 and generation of a neutralizing rat IL-13 antiserum. *Biochem. Biophys. Res. Commun.* 235:529-532.
40. van Ginkel, F.W., McGhee, J.R., Liu, C.G., Simecka, J.W., Yamamoto, M., Frizzell, R.A., Sorscher, E.J., Kiyono, H., and **Pascual, D.W.** 1997. Adenoviral gene delivery elicits distinct pulmonary-associated T helper cell responses to the vector and to its transgene. *J. Immunol.* 159:685-693.
41. Wu, S., **Pascual, D.W.**, Lewis, G.K., and Hone, D.M. 1997. Induction of mucosal and systemic responses against human immunodeficiency virus type-1 gp120 in mice after oral immunization with a single dose of a *Salmonella*-HIV vector. *AIDS Res. Hum. Retrovirus* 13:1187-1194.
42. **Pascual, D. W.**, Coste, M., Boyaka, P.N., Kiyono, H., and McGhee, J. R. 1997. Spontaneously hypertensive rat: cholera toxin converts suppression to immunity through a Th2 cell-IL-4 pathway. *Am. J. Physiol.* 273(Regulatory Integrative Comp. Physiol. 42:R1509-R1518.
43. Roos, A., Schilder-Tol, E.J.M., Chand, M.A., Claessen, N., Lakkis, F.G., **Pascual, D.W.**, Weening, J.J., and Aten, J. 1998. Differential regulation of expression of the MHC class II molecules RT1.B and RT1.D on rat B lymphocytes: effects of IL-4, IL-13, and IFN- γ . *Immunology* 93:33-40.
44. **Pascual, D.W.**, Walters, N., and Hillemeier, P. 1998. Repeated intratracheal instillations of nonreplicating adenovirus 2 vector attenuate CTL responses and IFN- γ production. *J. Immunol.* 160:4465-4472.
45. VanCott, J.L., Chatfield, S.N., Roberts, M., Hone, D.M., Hohmann, E., **Pascual, D.W.**, Yamamoto, M., Yamamoto, S., and J.R. McGhee. 1998. Regulation of host immune responses by modification of *Salmonella* virulence genes. *Nature-Med.* 4: 1247-1252.
46. Ascón, M.A., Hone, D.M., Walters, N., and **Pascual, D.W.** 1998. Oral immunization with a *Salmonella* vaccine vector expressing recombinant enterotoxigenic *Escherichia coli* K99 fimbriae elicits elevated antibody titers for protective immunity. *Infect. Immun.* 66:5470-5476.
47. **Pascual, D. W.**, Stanisiz, A. M., Bienenstock, J., and Bost, K. L. 1999. Neural intervention in mucosal immunity. Mucosal Immunology, 2nd edition, Section C: Functional characteristics of mucosal cells and tissues, P. L. Orga, J. Mestecky, M. E. Lamm, W.

- Strober, J. Bienenstock, and J. R. McGhee, ed., Academic Press, Inc., San Diego, CA, Chap. 37, pp. 631-642.
48. Hone D.M., M.T. Shata, **D.W. Pascual**, and G.K. Lewis. 1999. Mucosal vaccination with *Salmonella* vaccine vectors. In: Intracellular Bacterial Vaccine Vectors: Immunology, Cell Biology and Genetics, J. Wiley and Sons, New York, NY, pp. 171-222.
 49. Csencsits, K.L., Jutila, M.A., and **Pascual, D.W.** 1999. Nasal-associated lymphoid tissue (NALT): phenotypic and functional evidence for the primary role of peripheral node addressin in naive lymphocyte adhesion to high endothelial venules in a mucosal site. *J. Immunol.* 163:1382-1389.
 50. Dybing, J.K., Walters, N., and **Pascual, D.W.** 1999. The role of endogenous IL-18 in resolving *Salmonella typhimurium* infections. *Infect. Immun.* 67:6242-6248.
 51. **Pascual, D.W.**, Hone, D.M., Hall, S., van Ginkel, F.W., Yamamoto, M., Walters, N., Fujihashi, K., Powell, R., Wu, S., VanCott, J.L., Kiyono, H., and McGhee, J.R. 1999. Expression of recombinant enterotoxigenic colonization factor antigen I by *Salmonella typhimurium* elicits a biphasic T helper cell response. *Infect. Immun.* 67:6249-6256.
 52. Wu, Y., Boysun, M., Csencsits, K.L., and **Pascual, D.W.** 2000. Gene transfer facilitated by a cellular targeting molecule, reovirus protein $\sigma 1$. *Gene Therapy* 7:61-69.
 53. **Pascual, D.W.** 2001. The role of interleukin-18 in protective immunity in *Salmonella* infection. *Curr. Opin. Infect. Dis.* 14:265-271.
 54. **Pascual, D.W.**, White, M., Larson, T., and Walters, N. 2001. Impaired mucosal immunity in L-selectin-deficient mice orally immunized with a *Salmonella* vaccine vector. *J. Immunol.* 167:407-415.
 55. Wu, Y., Wang, X., Csencsits, K.L., Haddad, A., Walters, N., and **Pascual, D.W.** 2001. M cell-targeted DNA vaccination. *Proc. Natl. Acad. Sci., USA* 98:9318-9323.
 56. Csencsits, K.L., Walters, N., and **Pascual, D.W.** 2001. **Cutting Edge:** Dichotomy of homing receptor dependence by mucosal effector B cells: αE versus L-selectin. *J. Immunol.* 167:2441-2445.
 57. **Pascual, D.W.**, Trunkle, T., and Sura, J. 2002. Fimbriated *Salmonella enterica* serovar Typhimurium abates the initial inflammatory responses by macrophages. *Infect. Immun.* 70:4273-4281.

58. Hillemeier, P., White, M.D., and **Pascual, D.W.** 2002. Development of a transient CD4⁺CD8⁺ T cell subset in the cervical lymph nodes following intratracheal instillation with an adenovirus vector. *Cell. Immunol.* 215:173-185.
59. Csencsits, K.L. and **Pascual, D.W.** 2002. Mucosal addressin expression and binding interactions with naive lymphocytes vary among the cranial, oral, and nasal-associated lymphoid tissues. *Eur. J. Immunol.* 32:3029-3039.
60. Csencsits, K.L. and **Pascual, D.W.** 2002. Absence of L-selectin delays mucosal B cell responses in non-intestinal effector tissues. *J. Immunol.* 169:5649-5659.
61. Wang, X., Hone, D.M., Haddad, A., Shata, M.T., and **Pascual, D.W.** 2003. M cell DNA vaccination for CTL immunity to HIV. *J. Immunol.* 171:4717-4725.
62. Wang, X., Hillemeier, P., and **Pascual, D.W.** 2003. Segregation of mechanisms for CTL killing between lungs and regional lymph nodes subsequent to intratracheal delivery of an adenovirus 2 vector. *Viral Immunol.* 16:525-539.
63. **Pascual, D.W.** 2004. The role of tachykinins in bacterial infections. *Front. Biosci.* 9:3209-3217.
64. Walters, N., Sura, M., Trunkle, T., and **Pascual, D.W.** 2005. Enhanced immunoglobulin A response and protection against *Salmonella enterica* serovar Typhimurium in the absence of the substance P receptor. *Infect. Immun.* 73:317-324.
65. **Pascual, D. W.** and Bost, K. L. 2005. Neuropeptides for mucosal immunity. Mucosal Immunology, 3rd edition, Section B: Inductive and Effector Tissues and Cells of the Mucosal Immune System, J. Mestecky, M. E. Lamm, W. Strober, J. Bienenstock, J. R. McGhee, and L. Mayer eds., Academic Press, Inc., San Diego, CA., Chap. 38, pp. 737-748.
66. Kobayashi, R., Kohda, T., Kataoka, K., Ihara, H., Kozaki, S., **Pascual, D. W.**, Staats, H. F., Kiyono, H., McGhee, J. R., and Fujihashi, K. 2005. A novel neurotoxoid vaccine prevents botulism. *J. Immunol.* 174:2190-2195.
67. Piller, K.J., Clemente, T.E., Jun, S.M., Petty, C.C., Sato, S., **Pascual, D.W.**, and Bost, K.L. 2005. Expression and immunogenicity of an *E. coli* K99 fimbriae subunit antigen in soybean. *Planta* 222:6-18.
68. Wang, X., Kochetkova, I., Haddad, A., Hoyt, H., Hone, D.M., and **Pascual, D.W.** 2005. Transgene vaccination using *Ulex europaeus* agglutinin I (UEA-1) for targeted mucosal immunization against HIV-1 envelope. *Vaccine* 23:3836-3842.

69. Ascón, M.A., Ochoa-Repáraz, J., Walters, N., and **Pascual, D.W.** 2005. Partially assembled K99 fimbriae required for protection. *Infect. Immun.* 73:7274-7280.
70. Yang, X., Hudson, M., Walters, N., Bargatze, R.F., and **Pascual, D.W.** 2005. Selection of protective epitopes for *Brucella melitensis* using DNA vaccination. *Infect. Immun.* 73:7297-7303.
71. Jun, S., Gilmore, W., Callis, G., Rynda, A., Haddad, A., and **Pascual, D.W.** 2005. A live diarrheal vaccine imprints a Th2 cell bias and acts as an anti-inflammatory vaccine. *J. Immunol.* 175:6733-6740. *Article highlighted in "In This Issue."*
72. Yang, X., Becker, T., Jun, S.M., Walters, N., and **Pascual, D.W.** 2006. Deletion of *znuA* virulence factor attenuates *Brucella abortus* and confers protection against wild-type challenge. *Infect. Immun.* 74:3874-3879.
73. Maddaloni, M., Staats, H.F., Mierzejewska, D., Hoyt, T., Robinson, A., Callis, G., Kozaki, S., Kiyono, H., McGhee, J.R., Fujihashi, K., and **Pascual, D.W.** 2006. Mucosal vaccine targeting improves onset of mucosal and systemic immunity to botulinum neurotoxin A (BoNT/A). *J. Immunol.* 177: 5524-5532.
74. Yang, X., Hinnebusch, B.J., Trunkle, T., Bosio, C.M., Suo, Z., Tighe, M., Harmsen, A., Becker, T., Crist, K., Walters, N., Avci, R., and **Pascual, D.W.** 2007. Oral vaccination with *Salmonella* simultaneously expressing *Yersinia pestis* F1 and V antigens protects against bubonic and pneumonic plague. *J. Immunol.* 178:1059-1067. *Article highlighted in "In This Issue."*
75. Ochoa-Repáraz, J., Riccardi, C., Rynda, A., Jun, S., Callis, G., and **Pascual, D.W.** 2007. Regulatory T cell vaccination without autoantigen protects against experimental autoimmune encephalomyelitis. *J. Immunol.* 178:1791-1799.
76. Suo, Z., Yang, X., Avci, R., Kellerman, L., **Pascual, D.W.**, Fries, M., and Steele, A. 2007. HEPES-stabilized encapsulation of *Salmonella typhimurium*. *Langmuir* 23:1365-1374 .
77. Fujihashi, K., Staats, H.F., Kozaki, S., and **Pascual, D.W.** 2007. Mucosal vaccine development for botulinum intoxication. *Expert Rev. Vaccines* 6:35-45.
78. Yang, X., Walters, N., Robison, A., Trunkle, T., and **Pascual, D.W.** 2007. Nasal immunization with recombinant *Brucella melitensis* bp26 and trigger factor with cholera toxin reduces *B. melitensis* colonization. *Vaccine* 25:2261-2268.

79. **Pascual, D.W.**, Ochoa-Repáraz, J., Rynda, A., and Yang, X. 2007. Tolerance in the absence of auto-antigen. *Endocrine, Metabolic and Immune Disorders - Drug Targets* 7:203-210.
80. **Pascual, D.W.** 2007. *Commentary: Vaccines are for dinner.* *Proc. Natl. Acad. Sci., USA* 104: 10757-10758.
81. Hedges J.F., Buckner, D.L., Rask, K.M., Kerns, H.M., Jackiw, L.O., Trunkle, T.C., **Pascual, D.W.**, and Jutila, MA. 2007. Mucosal lymphatic-derived $\gamma\delta$ T cells respond early to experimental *Salmonella enterocolitis* by increasing expression of IL-2R α . *Cell. Immunol.* 246:8-16.
82. Ochoa-Repáraz, J., Sentissi, J., Trunkle, T., and **Pascual, D.W.** 2007. Attenuated *Coxiella burnetii* phase II causes a febrile response in gamma interferon knockout and toll-like receptor 2 knockout mice and protects against reinfection. *Infect. Immun.* 75:5845-5858.
83. **Pascual, D.W.**, Riccardi, C., and Csencsits, K. 2008. Distal IgA immunity can be sustained by $\alpha\epsilon\beta7^+$ B cells in L-Selectin $^{-/-}$ mice following oral immunization. *Mucosal Immunol.* 1:68-77.
84. Rynda, A., Maddaloni, M., Mierzejewska, D., Ochoa-Repáraz, J., Maślanka, T., Crist, K., Riccardi, C., Barszczewska, B., Fujihashi, K., McGhee, J.R., and **Pascual, D.W.** 2008. Low-dose tolerance is mediated by microfold cell ligand, reovirus protein $\sigma 1$. *J. Immunol.* 180: 5187-5200.
85. Suo, Z., Avci, R., Yang, X., and **Pascual, D.W.** 2008. An efficient immobilization and patterning of live bacterial cells. *Langmuir* 24:4161-4167.
86. Suzuki, H., Sekine, S., Kataoka, K., **Pascual, D.W.**, Maddaloni, M., Kobayashi, R., Fujihashi, K., Kozono, H., McGhee, J.R., and Fujihashi, K. 2008. Ovalbumin-protein $\sigma 1$ M cell targeting facilitates oral tolerance with loss of antigen-specific CD4 $^+$ T cells. *Gastroenterology* 135:917-925.
87. Ochoa-Repáraz, J., Rynda, A., Ascón, M.A., Yang, X., Kochetkova, I., Riccardi, C., Callis, G., Trunkle, T., and **Pascual, D.W.** 2008. IL-13 production by regulatory T cells protects against experimental autoimmune encephalomyelitis independently of autoantigen. *J. Immunol.* 181:954-968.
88. **Pascual, D.W.**, Wang, X., Kochetkova, I., Callis, G., and Riccardi, C. 2008. Absence of CD8 $^+$ lymphoid dendritic cell maturation in L-Selectin $^{-/-}$ respiratory compartment attenuates anti-viral immunity. *J. Immunol.* 181:1345-1356.

89. Kochetkova, I., Trunkle, T., Callis, G., and **Pascual, D.W.** 2008. Vaccination without auto-antigen protects against collagen II-induced arthritis via immune deviation and regulatory T cells. *J. Immunol.* 181:2741-2452. *Featured in Research Highlights of Nature Clinical Practice Rheumatology* 4:622, 2008.
90. Yamanaka, H., Hoyt, T., Yang, X., Golden, S., Bosio, C.M., Crist, K., Maddaloni, M., and **Pascual, D.W.** 2008. A nasal interleukin-12 DNA vaccine coexpressing *Yersinia pestis* F1-V fusion protein confers protection against pneumonic plague. *Infect. Immun.* 76:4564-4573.
91. Yamanaka, H., Hoyt, T., Bowen, R., Yang, X., Crist, K., Golden, S., Maddaloni, M., and **Pascual, D.W.** 2009. An IL-12 DNA vaccine co-expressing *Yersinia pestis* antigens protects against pneumonic plague. *Vaccine* 27:80-87.
92. Suo, Z., Avci, R., Deliorman, M., Yang, X., and **Pascual, D.W.** 2009. Bacteria survive multiple puncturings of their cell walls. *Langmuir* 25:4588–4594.
93. Suo, Z., Yang, X., Avci, R., Deliorman, M., Rugheimer, P., **Pascual, D.W.**, and Idzerda, Y. 2009. Antibody selection for immobilizing living bacteria. *Anal. Chem.* 81:7571-7578.
94. Rynda, A., Maddaloni, M., Ochoa-Repáraz, J., Callis, G., and **Pascual, D.W.** 2010. IL-28 supplants requirement for T_{reg} cells in protein σ 1-mediated protection against murine experimental autoimmune encephalomyelitis (EAE). *PloS-ONE* 5:e8720.
95. Yang, X., Thornburg, T., Walters, N., and **Pascual, D.W.** 2010. $\Delta znuA \Delta purE$ *Brucella abortus* 2308 mutant as a live vaccine candidate. *Vaccine* 28:1069-1074.
96. Yamanaka, H., Hoyt, T., Yang, X., Bowen, R., Golden, S., Crist, K., Becker, T., Maddaloni, M., and **Pascual, D.W.** 2010. A parenteral DNA vaccine protects against pneumonic plague. *Vaccine* 28:3219–3230.
97. Kochetkova, I., Golden, S., Crist, K., Callis, G., and **Pascual, D. W.** 2010. IL-35 stimulation of CD39⁺ regulatory T cells confers protection against collagen II-induced arthritis via the production of IL-10. *J. Immunol.* 184:7144-7153.
98. Clapp, B., Golden, G., Maddaloni, M., Staats, H.F., and **Pascual, D.W.** 2010. Adenovirus F protein as a delivery vehicle for botulinum B. *BMC-Immunology* 11:36.
99. Staats, H.F., Fielhauer, J.R., Thompson, A.L., Tripp, A.A., Sobel, A., Maddaloni, M., Abraham, S.N., and **Pascual, D.W.** 2011. Mucosal targeting of a BoNT/A subunit vaccine adjuvanted with a mast cell activator enhances induction of BoNT/A neutralizing antibodies in rabbits. *PloS-ONE* 6: e16532.

100. Rynda-Apple, A., Huarte, E., Maddaloni, M., Callis, G., Skyberg, J.A., and **Pascual, D.W.** 2011. Active immunization using a single dose immunotherapeutic abates established EAE via IL-10 and regulatory T cells. *Eur. J. Immunol.* 41:313-323. *Article highlighted in "In This Issue."*
101. Clapp, B., Walters, N., Thornburg, T., Hoyt, T., Yang, X., and **Pascual, D.W.** 2011. DNA vaccination of bison to brucellar antigens elicits elevated antibody and IFN- γ responses. *J. Wildl. Dis.* 47:501-510.
102. Skyberg, J.A., Thornburg, T., Rollins, M.C., Huarte, E., Jutila, M.A., and **Pascual, D.W.** 2011. Murine and bovine $\gamma\delta$ T cells enhance innate immunity against *Brucella abortus* infections. *PloS-ONE* 6: e21978.
103. Clapp, B., Skyberg, J.A., Yang, X., Thornburg, T., Walters, N., and **Pascual, D.W.** 2011. Protective live oral brucellosis vaccines stimulate Th1 and Th17 cell responses. *Infect. Immun.* 79: 4165-4174.
104. Yang, X., Suo, Z., Thornburg, T., Holderness, K., Suo, Z., Cao, L., Lim, T., Avci, R., and **Pascual, D.W.** 2011. Serum antibodies protect against intraperitoneal challenge with enterotoxigenic *Escherichia coli* (ETEC). *J. Biomed. Biotech.* doi:10.1155/2011/632396.
105. Kochetkova, I., Crist, K., Callis, G., and **Pascual, D. W.** 2011. Segregated regulatory CD39⁺ CD4⁺ T cell function: TGF- β -producing Foxp3⁻ and IL-10-Producing Foxp3⁺ Cells are interdependent for protection against collagen-induced arthritis. *J. Immunol.* 187:4654-4666.
106. Skyberg, J.A., Robison, A., Golden, S., Rollins, M.C.F., Callis, G., Kochetkova, I., Jutila, M.A., and **Pascual, D.W.** 2011. Apple polyphenols require T cells to ameliorate dextran sulfate sodium-induced colitis and dampen proinflammatory cytokine expression. *J. Leuk. Biol.* 90: 1043-1054. *Article highlighted in "Spotlight on Leading Edge Research," picture featured on journal cover, and featured in a press release (<http://www.sciencedaily.com/releases/2011/11/111130100455.htm>).*
107. Huarte, E., Rynda-Apple, A., Riccardi, C., Skyberg, J.A., Golden, S., Rollins, M.C.F., Ramstead, A., Jackiw, L.O., Maddaloni, M., and **Pascual, D.W.** 2011. Tolerogen-induced interferon-producing killer dendritic cells (IKDCs) protect against EAE. *J. Autoimmun.* 37:328-341.
108. Yamamoto, M., **Pascual, D. W.**, and Kiyono, H. M cell-targeted mucosal vaccine strategies. 2012. In: Current Topics in Microbiology and Immunology on Mucosal Vaccines (Mucosal Vaccines: Modern Concepts, Strategies and Challenges). Chapter 3. P. Kozlowski, ed. Springer, Heidelberg, Germany. Vol. 354:39-52.

109. Jun, S-M., Clapp, B., Zlotkowska, D., Hoyt, T., Holderness, K., Maddaloni, M., and **Pascual, D.W.** 2012. Sublingual immunization with adenovirus F protein-based vaccines stimulates protective immunity against botulinum neurotoxin A intoxication. *Intern. Immunol.* 24:117-128.
110. Yang, X., Suo, Z., Thornburg, T., Holderness, K., Walters, N., Kellerman, L., Loetterle, L., Avci, R., and **Pascual, D.W.** 2012. Expression of *Escherichia coli* virulence usher protein attenuates wild-type *Salmonella*. *Virulence* 3:29-42. *Highlighted by C. C. Goller and P. C. Seed: Coming of AGE: Facile generation of attenuated vaccine strains through heterologous gene expression. Virulence* 3:12 - 14, 2012.
111. Jun, S-M., Ochoa-Repáraz, J., Zlotkowska, D., and **Pascual, D.W.** 2012. Bystander-mediated stimulation of proteolipid protein-specific regulatory T (T_{reg}) cells confers protection against experimental autoimmune encephalomyelitis (EAE) via TGF- β . *J. Neuroimmunol.* 245:39-47.
112. Schepetkin, I.A., Kirpotina, L.N., Khlebnikov, A.I., Hanks, T.S., Kochetkova, I., **Pascual, D.W.**, Jutila, M.A., and Quinn, M.T. 2012. Identification and characterization of a novel class of c-Jun N-terminal kinase inhibitors. *Mol. Pharmacol.* 81:832-45.
113. Skyberg, J.A., Rollins, M.C.F., Holderness, J.S., Marlenee, N.L., Schepetkin, I.A., Goodyear, A., Dow, S.W., Jutila, M.A., and **Pascual, D.W.** 2012. Nasal Acai polysaccharides potentiate innate immunity to protect against pulmonary *Francisella tularensis* and *Burkholderia pseudomallei* infections. *PLoS-Pathogens* 8:e1002587.
114. Zlotkowska, D., Maddaloni, M., Riccardi, C., Walters, N., Holderness, K., Callis, G., Rynda-Apple, A., and **Pascual, D.W.** 2012. Loss of sialic acid binding domain redirects protein σ 1 to enhance M cell-directed vaccination. *PLoS-ONE* 7: e36182.
115. Skyberg, J.A., Thornburg, T., Kochetkova, I., Layton, W., Callis, G., Rollins, M.C.F., Riccardi, C., Becker, T., Golden, S., and **Pascual, D.W.** 2012. IFN- γ -deficient mice develop IL-1-dependent cutaneous and musculoskeletal inflammation during experimental brucellosis. *J. Leuk. Biol.* 92:375-387.
116. Yang, X., Thornburg, T., Suo, Z., Jun, S., Robison, A., Li, J., Lim, T., Cao, L., Hoyt, T., Avci, R., and **Pascual DW.** 2012. Flagella overexpression attenuates *Salmonella* pathogenesis. *PLoS ONE* 7:e46828.
117. Hendricks, J. M., Riccardi, C., and **Pascual, D.W.**, and Hardy, M. E. 2012. 18 β -glycyrrhetic acid delivered orally induces isolated lymphoid follicle maturation at the intestinal mucosa and attenuates rotavirus shedding. *PLoS-ONE* 7:e49491.

118. Yang, X., Skyberg, J.A., Cao, L., Thornburg, T., Clapp, B., and **Pascual, D.W.** 2013. Progress in *Brucella* vaccine development. *Front. Biol.* 8:60-77. [10.1007/s11515-012-1196-0](https://doi.org/10.1007/s11515-012-1196-0) (2012).
119. Vicente, S., Díaz-Freitas, B., Peleteiro, M., Sánchez, A., **Pascual, D.W.**, González-Fernández, A., and M.J. Alonso. 2013. A polymer/oil based nanovaccine as a single-dose immunization approach. *PLoS ONE* 8:e62500.
120. **Pascual, D.W.**, Suo, Z., Cao, L., Avci, R., and Yang, X. 2013. Attenuating gene expression (AGE) for vaccine development. *Virulence* 4:384-390. *Virulence cover image depicts our Salmonella overexpressing CFA/I fimbriae.*
121. Skyberg, J.A., Rollins, M.C.F., Samuel, J., Sutherland, M., Belisle, J.T., and **Pascual, D.W.** 2013. IL-17 protects against the *Francisella tularensis* live vaccine strain, but not against virulent type A *F. tularensis*. *Infect. Immun.* 81: 3099-3105.
122. Kouakou, K., Schepetkin, I.A., Jun, S.M., Kirpotina, L.N., Yapi, A., Khramova, D.S., **Pascual, D.W.**, Ovodov, Y.S., Jutila, M.A., and Quinn, M.T. 2013. Immunomodulatory activity of polysaccharides isolated from *Clerodendrum splendens*: Beneficial effects in experimental autoimmune encephalomyelitis. *BMC Complement. Altern. Med.* 13:149.
123. Kochetkova, I., Thornburg, T., Callis, G., Holderness, K., Maddaloni, M., and **Pascual, D.W.** 2014. Oral *Escherichia coli* colonization factor antigen I (CFA/I) fimbriae ameliorate arthritis via IL-35, not IL-27. *J. Immunol.* 192:804-816.
124. **Pascual, D.W.**, Yang, X., Holderness, K., Jun, S.M., Maddaloni, M., and Kochetkova, I. 2014. Regulatory T cell vaccination independent of auto-antigen. *Exp. Mol. Med.* 46:e82.
125. Maddaloni, M., Kochetkova, I., Hoffman, C., and **Pascual, D.W.** 2014. Paratransgenesis feasibility in the honeybee (*Apis mellifera*) using *Fructobacillus fructosus* commensal. *J. Appl. Microbiol.* 117:1572-1584.
126. Maddaloni, M., Kochetkova, I., Jun, S.M., Callis, G., Thornburg, T., and **Pascual, D.W.** 2015. Milk-based nutraceutical for treating autoimmune arthritis via the stimulation of IL-10- and TGF- β -producing CD39⁺ regulatory T cells. *PLoS ONE* 10:e117825.
127. Sha, X., Meng, S., Li, X., Xi, H., Maddaloni, M., **Pascual, D.W.**, Shan, H., Jiang, X., Wang, H., and Yang, X.-F. 2015. Interleukin-35 inhibits endothelial cell activation by suppressing MAPK-AP1 pathway. *J. Biol. Chem.* 290:19307-19318.
128. Maddaloni, M. and **Pascual, D.W.** 2015. Isolation of oxalotrophic bacteria associated with *Varroa destructor* mites. *Lett. Appl. Microbiol.* 61:411-417.

129. Clapp, B., Yang, X., Thornburg, T., Walters, N., and **Pascual, D.W.** 2016. Nasal vaccination stimulates CD8⁺ T cells for potent protection against mucosal *Brucella melitensis* challenge. *Immunol. Cell Biol.* 94:496-508.
130. Goodwin, Z.I. and **Pascual, D.W.** 2016. Brucellosis vaccines for livestock. *Vet. Immunol. Immunopath.* 181:51-58.
131. Huarte, E., Jun, S-M., Rynda-Apple, A., Golden, S., Jackiw, L., Hoffman, C., Maddaloni, M., and **Pascual, D.W.** 2016. Regulatory T cell dysfunction acquiesces to BTLA⁺ regulatory B cells subsequent to oral intervention in experimental autoimmune encephalomyelitis. *J. Immunol.* 196:5036-5046.
132. de Moraes, M., Chapin, T., Ginn, A., Wright, A.C., Parker, K., Hoffman, C., **Pascual, D.W.**, Danyluk, M.D., and Teplitski, M. 2016. Development of an avirulent *Salmonella* surrogate for modeling pathogen behavior in pre- and post-harvest environments. *Appl. Environ. Microbiol.* 82:4100-4111.
133. Yang, X., Clapp, B., Thornburg, T., Hoffman, C., and **Pascual, D.W.** 2016. Vaccination with a *ΔnorD ΔznuA Brucella abortus* mutant confers potent protection against virulent challenge. *Vaccine* 34:5290-5297.
134. National Academies of Sciences, Engineering, and Medicine (authoring committee: McElywain, T.F. [Chair], Adams, L.G., Baldwin, C.L., Coughenour, M.B., Cross, P.C., Horan, R.D., Jessup, D.A., Oedekoven, D.P., **Pascual, D.W.**, Ragan, V.E., and Tonsor, G.T.). 2017. Revisiting Brucellosis in the Greater Yellowstone Area. The National Academies Press. Washington, D.C. <https://doi.org/10.17226/24750>
135. Li, X., Shao, Y., Sha, X., Fang, P., Kuo, Y.-M., Andrews, A., Li, Y.-F., Yang, W., Maddaloni, M., **Pascual, D.W.**, Luo, J., Jiang, X., Wang, H., and Yang, X.-F. 2018. IL-35 suppresses endothelial cell activation by inhibiting mitochondrial ROS-mediated site-specific acetylation of histone 3 Lysine 14. *Arterioscler. Thromb. Vasc. Biol.* 38:599-609.
136. **Pascual, D.W.**, Yang, X., Wang, H., Goodwin, Z., Hoffman, C., and Clapp, B. 2018. Alternative strategies for vaccination to brucellosis. *Microbes & Infect.* 20:599-605.
137. Maddaloni, M., Kochetkova, I., Hoffman, C., and **Pascual, D.W.** 2018. Delivery of IL-35 by *Lactococcus lactis* ameliorates collagen-induced arthritis in mice. *Front. Immunol.* 9:269.
138. Crosby, F.L., Lundgren, A.M. Hoffman, C., **Pascual, D.W.**, and Barbet, A.F. 2018. VirB10 vaccination for protection against *Anaplasma phagocytophilum*. *BMC Microbiology* 18:217.

139. Jones, D. I., Pollara, J. J., Johnson-Weaver, B. T., LaBranche, C.C., Montefiori B, D. C., Pickup, D. J., Permar, S. R., Abraham, S. N., Maddaloni, M., **Pascual, D.W.**, and Staats, H.F. 2019. Optimized mucosal MVA prime/gp120 boost vaccination regimen induces similar antibody responses as an intramuscular regimen. *J. Virol.* 93: e00475-19.
140. **Pascual, D.W.** 2020. Mucosal approaches for systemic immunity to anthrax, brucellosis, and plague. In *Mucosal Vaccines*, 2nd ed., H. Kiyono and D.W. Pascual, eds., Academic Press, Elsevier, Inc., London, United Kingdom, Chap. 25, pp. 425-460.
141. Sato, S. and **Pascual, D.W.** 2020. M cell-targeted vaccines. In *Mucosal Vaccines*, 2nd ed., H. Kiyono and D.W. Pascual, eds., Academic Press, Elsevier, Inc., London, United Kingdom, Chap. 28, pp. 487-498.
142. Wang, H., Hoffman, C., Yang, X., Clapp, B., and **Pascual, D.W.** 2020. Targeting resident memory T cell immunity culminates in pulmonary and systemic protection against *Brucella* infection. *PlosPathogens* 16:e1008176.
143. Nelson, A.S., Maddaloni, M., Abbott, J., Hoffman, C., Akgul, A., Ohland, C., Gharalbeh, R., Jobin, C., Brusko, T.M., and **Pascual, D.W.** 2020. Oral therapy with colonization factor antigen I prevents development of type 1 diabetes in Non-obese Diabetic mice. *Scientific Rpts.* 10:6156 .
144. Maślanka, T., Clapp, B., Hoffman, C., Robison, A., Gregorczyk, I., and **Pascual, D.W.** 2020. Nasal vaccination of $\beta 7$ integrin-deficient mice retains elevated IgA immunity. *Immunol. Cell Biol.* 98:667-681.
145. Akgul, A., Maddaloni, M., Jun, S.-M., Nelson, A.S., Aguilera Odreman, V., Hoffman, C., Bhagyaraj, E., Voigt, A., Abbott, J.R., Nguyen, C.Q., and **Pascual, D.W.** 2021. Stimulation of regulatory T cells with *Lactococcus lactis* expressing enterotoxigenic *E. coli* colonization factor antigen 1 retains salivary flow in a genetic model of Sjögren's Syndrome. *Arthritis Research & Therapy* 23:99.
146. Hui, W.W., Emerson, L.E., Clapp, B., Sheppe, A.E., Sharma, J., del Castillo, J., Ou, M., Maegawa, G.B.H., Hoffman, C., Larkin, J., **Pascual, D.W.**, and Edelmann, M.J. 2021. Antigen-encapsulating host extracellular vesicles derived from infected cells stimulate pathogen-specific Th1-type responses in vivo. *PLoS Pathogens* 17:e1009465.
147. Bhagyaraj, E., Wang, H., Yang, X., Hoffman, C., Akgul, A., Goodwin, Z.I., and **Pascual, D.W.** 2021. Mucosal vaccination primes NK cell-dependent development of CD8⁺ T cells against pulmonary *Brucella* infection. *Front. Immunol.* 12:697953.

148. Nelson, A.S., Akgul, A., Maddaloni, M., Bhagyaraj, E., Hoffman, C., and **Pascual, D.W.** 2021. Oral probiotic promotes indoleamine 2,3-dioxygenase- and TGF- β -producing plasmacytoid dendritic cells to initiate protection against type 1 diabetes. *Immunol. Lett.* 239:12-19.
149. **Pascual, D.W.**, Carey, S.K., and Moore, J.M. 2022. Spotlight: Great challenges, great minds meet at UF CVM. *Am. J. Vet. Res.* 83:ajvr.22.07.0111.
150. Goodwin, Z.I., Yang, X., Hoffman, C., and **Pascual, D.W.** 2022. Live mucosal vaccination stimulates potent protection via varied CD4⁺ and CD8⁺ T cell subsets against wild-type *Brucella melitensis* 16M challenge. *Front. Immunol.* 13:995327.
151. Emerson, L.E., Barker, H., Tran, T., Barker, S., Enslow, S., Ou, M., Hoffman, C., Jones, M., **Pascual, D.W.**, and Edelmann, M.J. 2022. Extracellular vesicles elicit protective immune responses against nontyphoidal *Salmonella* infection. *J. Extracell. Vesicles* 11:e12267.
152. **Pascual, D.W.**, Goodwin, Z., Bhagyaraj, E., Hoffman, C., and Yang, X. 2022. Activation of mucosal immunity as a novel therapeutic strategy for combating brucellosis. *Front. Microbiol.* 13:1018165.
153. Wang, H., Clapp, B., Hoffman, C., Yang, X., and **Pascual, D.W.** 2023. A single nasal dose vaccination with a *B. abortus* mutant potently protects against pulmonary infection. *J. Immunol.* 210:1576-1588.
154. Freguia, C.F., **Pascual, D.W.**, and Fanger, G. 2023. Targeting the microbiome as novel strategy to treat Sjögren's Syndrome. *Adv. Geriatr. Med. Res.* 5:e230004.
155. Carey, S. K., Adin, C. A., and **Pascual, D.W.** 2023. Advancing animal, human, and environmental health: translational focus meets innovative mindset at the University of Florida. *Am. J. Vet. Res.* 84:1.
156. Akgul, A., Furlan Freguia, C., Maddaloni, M., Hoffman, C., Voigt, A., Nguyen, C.Q., Fanger, N.A., Fanger, G.R., and **Pascual, D.W.** 2023. Treatment with a *Lactococcus lactis* that chromosomally express *E. coli cfa1* mitigates salivary flow loss in Sjögren's Syndrome-like disease. *Scientific Rpts.* 13:19489.
157. Yang, X., Goodwin, Z.I., Bhagyaraj, E., Hoffman, C., and **Pascual, D.W.** 2024. Parenteral vaccination with a live *Brucella melitensis* mutant protects against wild-type *B. melitensis* 16M challenge. *Microorganisms* 12:69.

MASTER STUDENT COMMITTEES

Chair, Kathryn Holderness, Master's student (2006-2012), and completed thesis: "**Identification of Immunodominant T Cell Epitopes from Enterotoxigenic *E. coli* Colonization Factor Antigen I (CFA/I) Responsible for T Helper Cell Cytokines,**" in April, 2012, IMID, Montana State University, Bozeman, MT.

Chair, Dr. Zakia I. Goodwin-Diaz, Master's student (2013-2015), and completed thesis: "**Immunogenicity and Protective Response of a Live Attenuated Double Mutant Vaccine Against *Brucella abortus* in Cattle,**" in August, 2015, ID&P, Univ. of Florida, Gainesville, FL.

Member, Jeff Holderness, M.S., student (2005-2008), and completed thesis in December, 2007, VMB, Montana State University, Bozeman, MT.

DOCTORAL STUDENT COMMITTEES

Chair, Keri L. Csencsits-Smith, Ph.D., student (1996-2001), and completed dissertation: "**Importance of L-Selectin in the Induction of Immune Responses in the Upper Respiratory Tract,**" Dec., 2001, VMB, Montana State University, Bozeman, MT. **Current Appointment:** Assistant Professor, University of Texas Health Science Center at Houston.

Chair, Sang Mu Jun, Ph.D., student (1998-2005), and completed dissertation: "**Vaccine Platform for Infection or Autoimmune Diseases Using an ETEC Fimbrial Scaffold,**" in March, 2009, VMB, Montana State University, Bozeman, MT. **Current Appointment:** Postdoctoral Research Associate (2012-2015), University of Florida, Gainesville, FL.

Chair, Agnieszka Rynda-Apple, Ph.D., student (2003-2008), and completed dissertation: "**Low Dose Tolerance Vaccine Platform, Reovirus Protein Sigma 1 and Treatment of Autoimmunity,**" in Sept., 2008, VMB, Montana State University, Bozeman, MT. **Current Appointment:** Assistant Professor, Department of Microbiology and Immunology, Montana State University, Bozeman, MT.

Chair, Hongbin (Vicky) Wang, Ph.D. student (2013-2017), and completed dissertation: "**Mucosal *Brucella* Vaccination Enhances Pulmonary Resident Memory T Cells for Protection Against *Brucella* Infections,**" in April, 2017, Department of Infectious Diseases & Immunology, College of Veterinary Medicine, University of Florida, Gainesville, FL. **Current Appointment:** Scientist II in Translational Development for Bristol-Myers Squibb, San Francisco, CA.

Chair, Andrew Nelson, Ph.D. student (2012-2018), and completed dissertation: "**Mucosal Tolerance Strategies for Treating Type 1 Diabetes in Non-Obese Diabetic Mice,**" in November, 2018, Department of Infectious Diseases & Immunology, College of

Veterinary Medicine, University of Florida, Gainesville, FL. **Current Appointment:** Business Development Manager, Quansys Biosciences, Logan, UT.

Chair, Dr. Zakia I. Goodwin, Ph.D. student (2016-2021), and completed dissertation: **“Vaccines for Brucellosis: Understanding Mucosal Protection Induced by Novel, Live Attenuated Candidate Paves the Way for Subunit Antigen Discovery,”** in July, 2021, Department of Infectious Diseases & Immunology, College of Veterinary Medicine, University of Florida, Gainesville, FL. Senior Scientist, AstraZeneca Pharmaceuticals, Gaithersburg, MD.

Member, Karen Sipes (Schmit), Ph.D., student (1994-1999), and completed dissertation in 1999, VMB, Montana State University, Bozeman, MT.

Member, Eric Wilson, Ph.D., student (1994-2000), and completed dissertation in 2000, VMB, Montana State University, Bozeman, MT.

Member, Jeff G. Leid, Ph.D., student (1995-2000), and completed dissertation in April, 2000, VMB, Montana State University, Bozeman, MT.

Member, Lynnelle McNamee (Pittet), Ph.D., student (2001-2006), and completed dissertation in Dec., 2006, VMB, Montana State University, Bozeman, MT.

External Member, Nyasha Chin’ombe, Ph.D., student, and completed dissertation in July, 2007, Institute of Infectious Disease and Molecular Medicine, University of Cape Town, South Africa.

External Member, Claire N. Gower, Ph.D., student (2006-2009), and completed dissertation in March, 2009, Ecology, Montana State University, Bozeman, MT.

External Member, Daniel W. Mielcarz, Ph.D., student (2005-2010), and completed dissertation in May, 2010, Department of Microbiology & Immunology, Dartmouth Medical School, Lebanon, NH.

Member, Jeff Holderness, student (2008-2012), and completed dissertation in April, 2012, IMID, Montana State University, Bozeman, MT.

Member, Andrew Ramstead, student (2008-2014), and completed dissertation in April, 2014, Microbiology and Immunology, Montana State University, Bozeman, MT.

Member, Tao Yang, student (2013-2015), Department of Infectious Diseases & Pathology, University of Florida, FL.

Member, Dr. Bianca Libanori Artiaga, student (2016-2018), Department of Animal Sciences, University of Florida, Gainesville, FL.

Member, Dr. Maria Von Chamier, student (2015-2019), Department of Infectious Diseases & Immunology, University of Florida, Gainesville, FL.

Member, Jessica Jacob, student (2016-2019), Department of Infectious Diseases & Immunology, University of Florida, Gainesville, FL.

Member, Dr. Erika Schwarz, student (2017-2020), Department of Comparative, Diagnostic, & Population Medicine, University of Florida, Gainesville, FL.

Member, Austin Sheppe, student (2017-2021), Department of Microbiology & Cell Science, University of Florida, Gainesville, FL.

Member, Alexandra Burne (2017-present), Department of Infectious Diseases & Immunology, University of Florida, Gainesville, FL.

Member, Melany Madrid, student (2018-2022), Department of Animal Sciences, University of Florida, Gainesville, FL.

Member, Kevin G. Senior, student (2021-2024), Department of Pediatrics, University of Florida, Gainesville, FL.

Member, Saloni Bhimani, student (2023-2023), Department of Microbiology & Cell Science, University of Florida, Gainesville, FL.

MENTORSHIP for CLINICAL FELLOWS

1. Anthony P. Cannella, M.D., Assistant Professor, Division of Infectious Diseases & Global Medicine, Univ. of Florida. I am serving on Dr. Cannella's mentoring committee for his NIH K08 AI104773 grant entitled, "Human Immune Responses in Symptomatic and Asymptomatic *Plasmodium vivax* Malaria; funded from 2013-2018.
2. Amy Y. Vittor, M.D., Ph.D., Assistant Professor, Division of Infectious Diseases & Global Medicine, Univ. of Florida. I am serving as her mentor on Dr. Vittor's K08 grant submission, 2014.
3. Leili Shahgholi, M.D., Clinical Fellow, Center of Movement Disorders and Neurorestoration, Dept. of Neurology, Univ. of Florida. I am serving as her mentor on her American Brain Foundation clinical research training fellowship in the neurological application of neurotoxins grant submission, 2015.

POSTDOCTORAL TRAINEES (1992-PRESENT)

1. Ali Akgul, Ph.D. is a Postdoctoral Research Associate (2017-2022) at Univ. of Florida, Gainesville, FL. **Current Appointment:** Senior Scientist, Merck & Co. West Point, PA.
2. Miguel Ascón-Cabrera, Ph.D. was a Postdoctoral Research Associate (1996-2000). **Current Appointment:** Research Associate Professor in Division of Infectious Diseases, Department of Medicine, John Hopkins University, Baltimore, MD.
3. Beata (Barszczewska) Clapp , D.V.M., Ph.D., was a Postdoctoral Scholar (2004-2006), and Research Scientist (2007 - 2012), Montana State University, Bozeman, MT. **Current Appointment:** Senior Biosafety Officer (2021-present), Penn State University, University Park, PA.
4. Jody K. (Dybing) Mays, Ph.D., was a Postdoctoral Scholar (1997-1998). **Current Appointment:** Microbiologist, Avian Disease and Oncology Research, United States Department of Agriculture, East Lansing, MI.
5. Bhagyaraj Ella, Ph.D., is a Postdoctoral Research Associate (2018-2022) at Univ. of Florida, Gainesville, FL. **Current Position:** Scientist 1, Champions Oncology, Rockville, MD.
6. Kevin M. Fogel, M.D., Postdoctoral Scholar (2007-2008), Montana State University, Bozeman, MT. **Current Position:** Critical Care Physician, Cincinnati VA Medical Center.
7. Asmahan Haddad, Ph.D., was a Postdoctoral Scholar (1999-2002), Montana State University, Bozeman, MT. **Current Appointment:** Research Scientist, Cedarlane, Burlington, Ontario, Canada.
8. Eduardo Huarte, Ph.D. was Postdoctoral Associate (2013), University of Florida, Gainesville, FL; he was a Postdoctoral Research Associate (2009-2012), Montana State University, Bozeman, MT. **Current Appointment:** Principal Investigator, PTC Therapeutics, South Plainfield, NJ.
9. SangMu Jun, Ph.D. is a Postdoctoral Research Associate (2012-2015), University of Florida, Gainesville, FL. He was Postdoctoral Research Associate (2009-2012), Montana State University, Bozeman, MT, and (2012-2014), University of Florida, Gainesville, FL.
10. Irina Kochetkova, M.D. is a Postdoctoral Research Associate (2003-2007); Research Scientist, (2007-2013), Montana State University, Bozeman, MT. **Current Appointment:** Research Scientist, Montana State University.

11. Massimo Maddaloni, Ph.D. is a Research Assistant Professor (2001-2006), Montana State University, Bozeman, MT. Visiting Assistant Professor (2007-2012), Montana State University. **Current Appointment:** Research Assistant Professor, Department of Infectious Diseases & Immunology, University of Florida, Gainesville, FL.
12. Jerzy Maj, M.D., was a Postdoctoral Scholar (2000-2002), Montana State University, Bozeman, MT.
13. Tomasz Maślanka, D.V.M., Ph.D. was a Postdoctoral Scholar (2006-2008), Montana State University, Bozeman, MT. **Current Appointment:** Assistant Professor, Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Warmia and Mazury, Olsztyn, Poland.
14. Dagmara Mierzejewska Zlotkowska, Ph.D., is a Research Scientist (2008-2010), Montana State University, and was a Postdoctoral Scholar (2002-2004), Montana State University, Bozeman, MT. **Current Appointment:** Assistant Professor, Department of Food Chemistry, Institute of Food Research, Polish Academy of Science, Olsztyn, Poland.
15. Javier Ochoa Repáraz, Ph.D., was a Postdoctoral Scholar (2005-2007), Montana State University, Bozeman, MT. **Current Appointment:** Assistant Professor in the Department of Biological Sciences, Boise State University, Boise, ID.
16. Jerod Skyberg, Ph.D., is a Postdoctoral Scholar (2006-2009); Research Scientist, (2009-2012), Montana State University, Bozeman, MT. **Current Appointment:** Associate Professor, Department of Veterinary Pathobiology, University of Missouri.
17. Won-Geun Son, D.V.M., Ph.D., was a Postdoctoral Scholar (1999-2000). **Current Appointment:** Professor of Immunology at Cheju National University, Cheju-do, Korea.
18. Frederick W. van Ginkel, Ph.D., was a Postdoctoral Fellow (1992-1995). **Current Appointment:** Professor of Pathobiology, Auburn University, Auburn, AL (2004-2016); deceased.
19. Nancy Walters, D.V.M., was a Postdoctoral Research Associate (1995-2001), and a Research Instructor (2001-2012), Montana State University, Bozeman, MT.
20. George Wang, D.V.M., Ph.D., was a Postdoctoral Research Associate (1998-2004). **Current Appointment:** Scientist, ImClone, New York.
21. Yunpeng Wu, M.D., Ph.D., was a Postdoctoral Scholar (1997-1999). **Current Appointment:** Internist at Ohio State University Hospital, Columbus, OH.

22. Hitoki Yamanaka, D.V.M., Ph.D. is a Postdoctoral Scholar (2006 - 2008), Montana State University, Bozeman, MT. **Current Appointment:** Associate Professor, Division of Animal Research, Research Center for Supports to Advanced Science, Shinshu University, Matsumoto, Japan.
23. Xinghong Yang, Ph.D., was a Postdoctoral Research Associate (1999-2001), and Research Assistant Professor (2001-2012), Montana State University, Bozeman, MT. **Current Appointment:** Research Assistant Professor (2013-present), University of Florida, Gainesville, FL.

SHORT-TERM TRAINEES

Izabela Gregorczyk, Ph.D., University of Warmia and Mazury, Olsztyn, Poland, Short_Term Scholar in mucosal immunology & flow cytometry (1/2018-2/2018), University of Florida, Gainesville, FL.