

Leonard D. Shultz, Ph.D.

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Curriculum Vitae

EDUCATION

- 1967 B.A., Biology, Northeastern University, Boston, MA
- 1971-1972 Predoctoral Trainee, US Public Health Services, University of Massachusetts, Amherst, MA
- 1972 Ph.D., Medical Microbiology, University of Massachusetts, Amherst, MA
- 1972-1974 Postdoctoral Fellow, The Jackson Laboratory, Bar Harbor, ME

RESEARCH POSITIONS

- 1967-1968 Research Assistant, Tufts University School of Medicine, Boston, MA
- 1968-1970 Graduate Teaching Assistant, University of Massachusetts, Amherst, MA
- 1970-1971 Lecturer, University of Massachusetts, Amherst MA
- 1974-1976 Research Associate, The Jackson Laboratory, Bar Harbor, ME
- 1976-1979 Assistant Professor, The Jackson Laboratory, Bar Harbor, ME
- 1979-1991 Associate Professor, The Jackson Laboratory, Bar Harbor, ME
- 1981 Cooperating Professor in Zoology, University of Maine, Orono, ME
- 1988-present Graduate Faculty Member, School of Biomedical Sciences and Engineering (GSBSE), University of Maine, Orono, ME
- 1991-present Professor, The Jackson Laboratory, Bar Harbor, ME
- 1995-2017 Research Professor, Department of Medicine, School of Medicine, University of Massachusetts Medical School, Worcester, MA
- 2017-present Professor of Medicine, Department of Medicine, School of Medicine, University of Massachusetts Medical School, Worcester, MA
- 1998-present Research Professor, Graduate School of Biomedical Sciences, University of Massachusetts Medical School, Worcester, MA
- 2006-2007 Assistant Clinical Professor, Department of Immunology, University of Connecticut, School of Medicine, Farmington, CT
- 2008 Adjunct Assistant Professor, Department of Immunology, University of Connecticut, School of Medicine, Farmington, CT

RESEARCH INTERESTS

Development and regulation of the immune system in normal and pathologic states: immunodeficiency; autoimmunity; tumor immunology; infectious disease; diabetes; development and validation of humanized mouse models as a preclinical bridge for translational investigations.

PROFESSIONAL ACTIVITIES

Board Membership:

- 1990-2015 In Vivo
- 2003-2008 Experimental Biology and Medicine
- 2004-2016 Stem Cell
- 2008-2014 Beta Cell Biology Consortium (BCBC), Principal Investigator
- 2012-2017 Stem Cell Cobre External Advisory Committee, Maine Medical Research Center

- 2018-present External Advisory Committee, Targeted Sphingolipid Metabolism for AML, University of Virginia Medical Center
2020-present External Scientific Advisory Board, SCID Pig model, Iowa State University

Grant Review Panels:

- 1987 Member, Special NIH Study Section
1992 Member, NIH Ad hoc Study Section
1994 NIH Study Section Mechanisms of Prostate Cancer
1996 Member, NIH Special Study Section on Prostate Carcinoma Invasion and Metastasis Factors
1997 Special NIAID Review Committee on SCID-HIV Animal Models for Evaluating HIV Therapeutics
1998 National Cancer Institute Review Committee Site Visit to the Fox Chase Cancer Institute
1999 National Cancer Institute, Program Projects in Immunology Review Committee
2001 Member, NIH Study Section as the Deut of Novel Aids therapies
2003 NIH Special Review panel on Prostate Carcinoma Program Projects
2004 NIH Study Section Mechanisms of Prostate Cancer
2005 NIH/NAIAD Ad hoc Study Section panel to review applications for Tissue based small animal models for HIV Drug Discovery
2005 Member, Ad Hoc Study Section to review the intramural program of the Dermatology branch of the National Cancer Institute
2005 Ad Hoc Review, NIH Kidney Biological and Hematological Subcommittee
2006 NIH/NAIAD, Ad hoc Study Section Panel to review applications for tissue based small animal models for HIV Drug Discovery
2010 JDRF Grants Review Study Section
2011 Medical Research Council of Canada
2011 The Arthritis Foundation
2011 Swiss National Fund for Scientific Research
2015 US-Israel Bi-National Science Foundation

Ad hoc Manuscript Reviews for Peer Reviewed Journals:

The Journal of Immunology, Proceedings of the National Academy of Sciences, USA, The American Journal of Pathology, The Journal of Gerontology, The Journal of Nutrition, Nature, Science, Nature Genetics, Experimental Hematology, Stem Cell Reports, Trends in Immunology, PLoS ONE, Drug Discovery, The Journal of Autoimmunity, Stem Cells and Development

Institutional Committees:

- 2004-present Genetic Resources Committee
2004-present RAF Advisory Committee
2005-2015 Human Subjects IRB, Chair
2005-present Research Grants Committee
2006-2007 Cancer Core Grant Committee
2014-present Radiation & Lab Safety, Co-Chair
2017-present Scientific Services PDX Faculty Committee
2018-present Mentor for Gary Ren

PROFESSIONAL SOCIETIES

American Association of Immunologists, American Society for Microbiology, American Diabetes Association, American Association for the Advancement of Science, American Society for Hematology, International Association for Comparative Research on Leukemia and Related Diseases

EXTRAMURAL RESEARCH SUPPORT

Current:

- 2021-2026 Co-Investigator, U24 CA263963-02, "*Pediatric Oncology In Vivo Testing Program Coordinating Center*," NIH/NCI (8/25/2021-6/30/2026)
- 2021-2026 Co-Investigator, 1 R01 CA251433-02, "*Lung Resident Mesenchymal Cells in the Pre-Metastatic Niche Formation*," NIH/NCI (4/1/2021-3/31/2026)
- 2020-2025 Principal Investigator, JDRF-5-COE-2020-967-M-N-02, "*A Cure for Type 1 Diabetes*," Juvenile Diabetes Research Foundation Int'l (10/1/2020-9/30/2025)
- 2020-2025 Co-Investigator, 5 R37 CA237307-03, "*The Role of Lung Resident Mesenchymal Stem Cells in Post-Chemotherapy Lung Metastases of Breast Cancer*," NIH/NCI (2/4/2020-1/31/2025)
- 2020-2025 Project Lead, 2 P30 CA034196-36, "*Cancer Center Support (Core) Grant – Cancer Models Development Shared Resource*," NIH/NCI (4/1/2020-3/31/2025)
- 2021-2024 Consortium Principal Investigator, Contract #75N93021C00004 (Yr2), "*Characterizing and Improving Humanized Immune System Mouse Models*," NIH/NIAID (2/2/2021-2/1/2024)
- 2019-2023 Consortium Principal Investigator, 5 U01 DK104218-05, "*Humanized Mouse Avatars for T1D*," NIH/NIDDK (09/20/2019-05/31/2023)
- 2019-2023 Principal Investigator, 5 R24 OD026440-04, "*Immunogenicity of Human Stem Cell-Derived Beta Cells and Muscle Cells in Humanized Mice*," NIH/OD (08/15/2019-07/31/2023)
- 2018-2023 Co-Investigator, 5 U01 CA224013-05, "*CSHL-JAX Patient-Derived Models of Pancreatic Cancer as Systems for Investigating Tumor Heterogeneity*," NIH/NCI (03/06/2018-02/28/2023)
- 2021-2022 Principal Investigator, DIF-2021-Shultz-HuMice Microglia AD, "*Development of Humanized Mouse Models for Evaluating the Role of Human Microglia in Alzheimer's Disease*," The Jackson Laboratory (11/3/2021-11/2/2022)
- 2021-2022 Principal Investigator, 3 R24 OD026440-03S1, "*Immunogenicity of Human Stem Cell-derived Beta Cells and Muscle Cells in Humanized Mice-Supplement: Live Imaging of SARS-COV-2 Infection in Humanized Mice*," NIH/OD (8/1/2021-7/31/2022)
- 2020-2022 Principal Investigator, JAX-DIF-FY20-LDS-Validation, "*Validation of an NSG Humanized Mouse Model for Investigations of Human Mature Neutrophil Development and Function*," The Jackson Laboratory Director's Innovation Fund (2/1/2020-4/17/2022)
- 2020-2022 Principal Investigator, JAX-DIF-LDS-CoVID-20, "*Development of a Humanized Mouse Model for SARS-CoV-2 Infection*," The Jackson Laboratory Director's Innovation Fund (4/7/2020-9/1/2022)

Completed:

- 2017-2022 Consortium Principal Investigator, 5 R01 AI132963-05, "*Novel Humanized Mouse Model Developed from Cord Blood CD34 Positive HSC and Autologous iPS Cell Derived Thymus*," NIH/NIAID (05/01/2017-04/30/2022)
- 2020-2020 Consortium Principal Investigator, OSP32191-00, "*Developing Human Pluripotent Stem Cells for Investigation and Treatment of Hypoparathyroidism*," Trustees of the University of Pennsylvania (1/1/2020-12/31/2020)

- 2018-2020 Principal Investigator, COLLAB-UMASS-LDS-2018, *“Umass/JAX Collaborative Study: To begin the development of a model of diet-induced fatty liver disease leading to non-alcoholic steatohepatitis (NASH) in humanized mice,”* University of Massachusetts Medical School (02/01/2018-01/31/2020)
- 2018-2020 Principal Investigator, Shultz DIF Novel NSG Mice-01, *“Development of Novel Strains of NSG Mice Demonstrating Enhanced Structure and Function of Lymphoid Organs and Heightened Human Immune Function Following Human HSC Engraftment,”* The Jackson Laboratory Director's Innovation Fund (01/09/2018-01/08/2020)
- 2014-2019 Consortium Principal Investigator, 1 UC4 DK104218-01 (Year 5) *“Humanized Mouse Avatars for T1D,”* NIH/NIDDK (9/25/2014-6/30/2019)
- 2014-2019 Project Lead, 5 P30 CA034196-33, 33S2, *“Cancer Center Support (Core) Grant – Cancer Models Development Resource,”* NIH/NCI (7/1/2014-11/30/2019)

PATENTS & LICENSING AGREEMENTS

- Shultz LD.** 2022. Transgenic mouse models supporting innate immune function. U.S. Publication No. 20220136002
- Shultz LD,** Verma MK, Greiner DL, Brehm MA. 2020. Genetically modified non-human animals and methods relating to complement dependent cytotoxicity. U.S Publication No. 20200359609. JUSTIA Patents.
- Shultz LD,** Brehm MA, Greiner DL. 2020. Immunodeficient mice expressing human interleukin 15. U.S. Publication No. 20200236916. JUSTIA Patents.
- Shultz LD,** Verma MK, Greiner DL, Brehm MA. 2020. Genetically modified non-human animals and methods relating to complement dependent cytotoxicity. U.S. Patent No. 10701911. JUSTIA Patents.
- Brehm MA, Wiles MV, Greiner DL, **Shultz LD.** 2020 NSG mice lacking MHC Class I and Class II. U.S. Publication No. 20200060245. JUSTIA Patents.
- Shultz LD,** Keck JG, Greiner DL, Brehm MA. 2019. Humanized mouse model with improved human innate immune cell development. U.S. Publication No. 20190320633. JUSTIA Patents.
- Shultz LD.** 2019. Genetically modified mouse model for human hepatocyte xenotransplantation. U.S. Publication No. 20190274290. JUSTIA Patents.
- Shultz LD,** Wiles MV. 2019. Methods and compositions relating to improved human red blood cell survival in genetically modified immunodeficient non-human animals. U.S. Publication No. 20190183101. JUSTIA Patents.
- Wiles MV, Hosur V, **Shultz LD.** 2018. Compositions and methods relating to tumor analysis. U.S. Publication No. 20180325085. JUSTIA Patents.
- Shultz LD,** Greiner DL, Brehm MA. 2018. Genetically modified non-human animals and methods relating to innate immune system response detection. 2018. U.S. Patent No. 10021861. JUSTIA Patents.
- Shultz LD,** Verma MK, Greiner DL, Brehm MA. 2018. Genetically modified non-human animals and methods relating to complement dependent cytotoxicity. U.S. Publication No. 20180184629. JUSTIA Patents.
- Hosur V, **Shultz LD.** 2017. Methods for identifying compounds that alter the activity of irhom polypeptides and use thereof. U.S. Publication No. 20170241986. JUSTIA Patents.
- Shultz LD,** Greiner DL, Brehm MA. 2016. Genetically modified non-human animals and methods relating to innate immune system response detection. U.S. Publication No. 20160345548. JUSTIA Patents.
- Shultz LD,** Greiner DL, Brehm MA. 2016. Genetically modified non-human animals and methods relating to innate immune system response detection. 2016. U.S. Patent No. 9414576. JUSTIA Patents.

- Ishikawa F, Saito Y, Ohara O, **Shultz LD**. 2015. Mouse having human leukemic stem cell and leukemic non-stem cell amplified therein, and methods for production thereof. U.S. Patent No. 9125384. JUSTIA Patents.
- Shultz LD**, Greiner DL, Brehm MA. 2015. Genetically modified non-human animals and methods relating to innate immune system response detection. U.S. Patent Application No. 20150105288. JUSTIA Patents.
- Ishikawa F, Ohara O, Saito Y, Kitamura H, Hijikata A, Ozawa H, **Shultz LD**. 2014. Leukemia stem cell markers. U.S. Publication No. 20140274788. JUSTIA Patents.
- Shultz LD**, Greiner DL. 2013. Transgenic non-human animal and methods for stem cell engraftment. U.S. Patent No. 8431767. JUSTIA Patents.
- Ishikawa F, Saito Y, **Shultz LD**. 2012. Agent for preventing recurrence of leukemia. U.S. Publication No. 20120121535. JUSTIA Patents.
- Ishikawa F, Ohara O, Saito Y, Kitamura H, Hijikata A, Ozawa H, **Shultz LD**. 2012. Leukemia stem cell markers. U.S. Patent Application No. 20120070450. JUSTIA Patents.
- Ishikawa F, Saito Y, Ohara O, **Shultz LD**. 2011. Mouse having human leukemic stem cell and leukemic non-stem cell amplified therein, and method for production thereof. U.S. Publication No. 20110307964. JUSTIA Patents.
- Shultz LD**, Greiner DL. 2011. Transgenic non-human animal and methods for stem cell engraftment. U.S. Publication No. 20110113496. JUSTIA Patents.

INVITED TALKS (2008 – PRESENT)

- Invited Speaker, NextGen humanized mice, IWHM6, 6th International Workshop on Humanized Mice, Kyoto University, Kyoto City, Japan, October 12, 2022.
- Invited Keynote Speaker, Evolution of Humanized Mice, EMBO Practical Course 2022: Humanized Mice, Personal Therapies and Big Data, Heidelberg, Germany, June 12, 2022.
- Invited Keynote Speaker, Humanized Mice in the Age of COVID, UK Humanized Mouse Symposium 2022, Fitzwilliam College, Cambridge, UK, March 28, 2022.
- Invited Speaker, Emerging Models of Humanized Mice for Biomedical Research, National Cancer Institute, 2021 CIRP Annual Virtual Meeting, June 17, 2021.
- Invited Speaker, Discussion Humanized Mouse Models for PDX Efforts, NCI/FNLCCR, Virtual meeting, June 3, 2021
- Invited Speaker, Emerging humanized mouse models for cancer research, Hematology/Oncology Grand Rounds, Penn State Hershey Cancer Center, Hershey, PA, February 6, 2020.
- Invited Speaker, Emerging humanized mouse models for cancer research, National Cancer Institute, NCI-Immuno-Oncology Models Workshop (Virtual), July 9-10, 2020.
- Invited Speaker, Immune Mechanisms Working Group Meeting of the NIH Immuno-Oncology Translational Network, September 8, 2020.
- Invited Speaker, NIH Virtual Workshop on Validation of Animal Models and Tools for Biomedical Research, December 2020.
- Invited Speaker, Next generation humanized mice for cancer immunotherapy, Cancer Immune Responsiveness Workshop, San Francisco, CA, May 14, 2018
- Invited Speaker, Designing the Patient-Derived Model Platform of the Future, The Jackson Laboratory-Beth Israel Deaconess Medical Center (JAX-BIDMC) Workshop, Farmington, CT, June 12, 2018
- Novartis Pharmaceutical Corp, Cambridge, MA, June 27, 2018
- Invited Speaker, Humanized mouse models for cancer research: challenges and opportunities, The 6th Annual Dr. Stanley G. Nathenson Memorial Lecture, Albert Einstein College of Medicine, Bronx, NY, November 7, 2018

- Regeneron's Workshop on Humanized Immune System Mice, Regeneron Auditorium, Regeneron Pharmaceuticals, Tarrytown, NY, November 28-29, 2018
- Plenary Speaker, Recent Advances and Opportunities in the Development and Use of Humanized Immune System Mouse Models, National Institutes of Health, Bethesda, MD, December 18, 2018
- Invited Speaker, Humanized mice for cancer research, Department of Medicine, Division of Hematology and Oncology, School of Medicine, University of Alabama, Birmingham, AL, January 31-February 2, 2017
- Invited Speaker, Generation of improved humanized mouse models for human infectious diseases, Les Pensieres, Foundation Merieux Conference Center, Veyrier du Lac, France, April 27, 2017
- Invited Speaker, Humanized mice in Cancer Research, 2nd Annual Advances in Immuno-Oncology Congress, Oxford Global, London, England, May 15-16, 2017
- Invited Speaker, Next generation humanized mouse models for cancer research, 2017 Summit for Cancer Immunotherapy, BioCanRx, Gatineau, Quebec, Canada, June 26, 2017
- Invited Speaker, Immune interventions in oncology: A think tank on modeling opportunities using mice and human specimens, National Cancer Institute (NCI) Workshop on "Modeling Immunotherapy in Mouse," Rockville, MD, September 17-20, 2017
- Invited Speaker, Highlights and perspectives of humanized mice, Humanized mice in biomedical research, EMBO Practical Course, EMBL, Heidelberg, Germany, October 15-20, 2017
- Invited Speaker, Next generation humanized mice in biomedical research, 2017 American College of Veterinary Pathologists (ACVP), Vancouver, BC, Canada, November 3-6, 2017
- Institute for Neurodegenerative Diseases, Weil Institute for Neurosciences, University of California San Francisco, November 6, 2017
- 5th International Workshop on Humanized Mice (IWHM5), University of Zurich, Switzerland, Jan 28-30, 2016
- Invited Speaker, Humanized mouse models for translational biomedical research, Medimmune, The Jackson Laboratory, Bar Harbor, ME, February 18, 2016
- Juvenile Diabetes Research Foundation (JDRF) nPOD 8th Annual Meeting, Miami, FL, Feb 21-24, 2016
- National Emerging Infectious Diseases Laboratories Meeting (NEIDL), Boston, MA, April 5-9, 2016
- 2016 Neuroendocrine Tumor Workshop, Cambridge, MA, May 4-6, 2016
- Invited Speaker, Humanized mice in translational immunology, Immunology 2016, American Association of Immunologists Annual Meeting, Washington State Convention Center, Seattle, WA, May 13, 2016
- Human Islet Research Network Meeting, Bethesda, MD, May 24-25, 2016
- Janssen, Pharmaceutical Companies of Johnson & Johnson, Philadelphia, PA, August 17-20, 2016
- Preclinical Models for Immunotherapy Development Scientific Input Engagement, San Francisco, CA, September 26-27, 2016
- Faculty Retreat, Point Lookout Conference Center, The Jackson Laboratory, Northport, ME, October 13-14, 2016
- AML P01 External Advisory Board Meeting, Penn State Hershey Medical Center, Hershey, PA, October 20-21, 2016
- The Jackson Laboratory Faculty Retreat, Portsmouth, NH, Oct 24-26, 2016
- 9th Annual Beth Israel Deaconess Medical Center (BIDMC) Cancer Symposium, Joseph B. Martin Center, Harvard Medical School, Boston, MA, November 2, 2016
- Janssen Pharmaceutical Companies of Johnson & Johnson, Spring House, PA, November 6-7, 2016
- The Jackson Laboratory Cancer Center 2016 Winter Retreat, Portland, ME, Dec 7-9, 2016
- JAX Cancer Center Retreat, Portland, ME, December 10-11, 2016
- The Jackson Laboratory-Beth Israel Deaconess Medical Center (JAX-BIDMC) Immunology Symposium, Boston, MA, December 15-17, 2016

- Myelodys Plastic Syndrome Fundraising Meeting, Jerry Hughes/MDS Research Fund-Raising, Bangor, ME, March 7, 2015
- Humanized Mouse Workshop, Boston, MA, March 11-12, 2015
- Invited Speaker, Of humanized mice and men, Stanford University, San Francisco, CA, March 25-27, 2015
- The Jackson Laboratory-Beth Israel Deaconess Medical Center (JAX-BIDMC) Immunology Workshop, JAX-GM, Farmington, CT, March 31-April 2, 2015
- HIRN Diabetes Meeting, Bethesda, MD, May 13-15, 2015.
- Invited Speaker, Of next generation humanized mice and men, AIDS/NIAID/NIH/DHHS-Improvements and Limitations of Humanized Mouse Models for, Rockville, MD, May 14-15, 2015
- Invited Speaker, Closing the gap between the mouse and human immune systems, American Gastroenterological Association (AGA)-Digestive Disease Week, Bethesda, MD, May 15-17, 2015
- Integrated Translational Science Center Workshop, The Banbury Center, Cold Spring Harbor Laboratory, Long Island, NY, June 18-20, 2015
- American Society of Tropical Medicine & Hygiene (ASTMH) 64th Annual Meeting, Philadelphia, PA, October 25-29, 2015
- 2014 Annual nPOD meeting, Atlantic Beach, FL, February 23-March 1, 2014
- Invited Speaker, Humanized mice for biomedical research, American Society of Gene & Cell Therapy 17th Annual Meeting, Washington D.C., May 23, 2014
- BIDMC/JAX Workshop, Boston, MA, October 21, 2014
- The Jackson Laboratory, Faculty Retreat, Northport, ME, November 3-5, 2014
- Invited Speaker, Humanized SCID mouse models for biomedical research, Stem Cell Institute Seminar Series, University of Minnesota Medical School, Minneapolis, MN, November 12, 2014
- EMMC Cancer Care of Maine, Brewer, ME, January 7, 2013
- Invited Speaker, Humanized SCID mouse models for cancer research, Hollings Cancer Center 2013 Spring Research Symposium, Models of Human Cancer for Translational Research, Medical University of South Carolina, Charleston, SC, March 15, 2013
- Astra Zeneca, Waltham, MA, April 28-30, 2013
- Merck Research Laboratories, Boston, MA, April 28-30, 2013
- 2013 BCBC Investigator Retreat, Biology of the Beta Cell Symposium, Reston, VA, May 6-9, 2013
- Bristol Myers Squibb, Philadelphia, PA, August 18-20, 2013
- Invited Speaker, Humanized mice as models for cancer growth and therapy, 4th International Workshop on Humanized Mice, "Humanized Mice as Models for Cancer Growth and Therapy," Seoul-Incheon, Korea, October 1, 2013
- Invited Speaker, Humanized mouse models in biomedical research, 46th Annual Meeting of the Society for Leukocyte Biology, Humanized Mouse Models in Biomedical Research, Newport, RI, October 20, 2013
- Invited Speaker, Animal Models and Personalized Medicine, NIH Symposium "Animal Models and Personalized Medicine," Bethesda, MD, Oct 28, 2013
- Invited Speaker, Humanized mice: A bridge to the clinic, University of Rochester Medical Center, Grand Rounds, University of Rochester, Rochester, NY, April 5, 2012
- 2012 BCBC Investigator Retreat, NIDDK, Chantilly, VA, May 1-4, 2012
- Invited Speaker, Humanized Mice: State of the art, 2012 ACLAM Forum for Life, St Petersburg Beach, FL, May 9, 2012
- Invited Speaker, Mice in biomedical research: A bridge to the clinic, Indiana University School of Medicine, Department of Microbiology/Immunology, Indianapolis, IN, May 17, 2012
- Next Generation Animal Models Targeting Personalized Disease Phenotypes, NIH, Bethesda, MD, September 6-7, 2012

- 17th International Conference of the Inflammation Research Association, Bolton Landing, NY, September 9-12, 2012
- University of Florida College of Medicine, Department of Pathology, Immunology and Laboratory Medicine, Gainesville, FL, February 15, 2011
- Invited Speaker, Humanized mouse model, Helmsley Project Meeting, Boston, MA, March 24, 2011
- Invited Speaker, Humanized mice in biomedical research, George Mason University, National Center for Biodefense and Infectious Diseases, Manassas, VA, April 22, 2011
- Invited Speaker, Humanized mice: A bridge to the clinic, Beckman Research Institute, City of Hope, Duarte, CA; May 24, 2011
- Invited Speaker, Bridging the gap with humanized mice, DARPA-USAMRIID Workshop, Washington DC, Fort Detrick, MD, July 29, 2011
- Invited Speaker, Overview of humanized mice: Progress, limitations and infectious diseases, Joint Laboratory Retreat, The Jackson Laboratory, Vanderbilt University, USAMRIID, The University of Massachusetts Medical School, Harvard, September 21, 2011
- Invited Speaker, Humanized mice in translational biomedical research, The New York Academy of Sciences Conference, Animal Models and Their Value in Predicting Efficacy and Toxicity, New York, NY, September 16, 2011
- Third International Workshop on Humanized Mice, Pittsburgh, PA, October 28-31, 2011
- JDRF Autoimmunity Center Consortium Retreat, New York, NY, March 1-3, 2010
- State University of New York, Buffalo, NY, April 14, 2010
- Invited Speaker, The humanized mouse model in translational research, Biogen Inc., Cambridge, MA, May 6-7, 2010
- Invited Speaker, Humanized mice in translational research, United Services University of Health Sciences, Washington, DC, May 12, 2010
- Workshop on Humanized Mice, Hannover, Germany, June 10, 2010
- Humanized Mouse Model Meeting, Washington DC, June 21, 2010
- Sanofi Aventis, Bridgewater, NJ, June 29, 2010
- Juvenile Diabetes Research Foundation, Diabetic Mouse Models, New York, NY July 14.
- Pfizer Inc, Boston, MA July 20, 2010
- Animal Models of Diabetic Complications Consortium (AMDCC) Meeting, Baltimore, MD, August 4, 2010
- Invited Speaker, State of the art of humanized mice, 8th Annual "Advances in Inflammation Research" Symposium, Brown University, Providence, RI, September 17, 2010
- Invited Speaker, Humanized mice in translational research, NIH, Bethesda, MD, October 11-12, 2010
- Johnson & Johnson Pharmaceuticals, Spring House, PA, November 9, 2010
- Symposium, Executive Summit: Humanized Mouse Models and Preclinical Research, Philadelphia, PA, November 10, 2010
- Invited Speaker, Humanized mice: State of the art, Frontier Speaker Series, Eisai, Inc, Andover/Boston, MA, November 19, 2010
- Maine Medical Research Institute, Scarborough, ME, Dec. 9, 2010
- Invited Speaker, Humanized SCID mice in biomedical research, Vermont Cancer Center Juckett Lecture, University of Vermont, Burlington, VT, January 6, 2009
- Sanofi Aventis Web Seminar, Feb. 3, 2009
- Invited Speaker, Humanized mouse models for biomedical research, Texas Tech University Health Sciences Center, El Paso, TX, March 18, 2009
- 2nd International Humanized Mouse Symposium, Amsterdam, The Netherlands, April 4, 2009
- Optimization of the immunodeficient mouse recipient, Studying Type 1 Diabetes by Combining Human iPS and Humanized Mouse Technologies, Boston, MA, April 21, 2009
- Humanized mouse models, The Jackson Laboratory-West, Sacramento, CA, May 5, 2009

- Children’s Hospital, Pittsburgh, PA, May 18, 2009
- Beta Cell Biology Consortium, Investigator Retreat, Washington, DC, May 27, 2009
- Juvenile Diabetes Research Foundation Meeting, Worcester, MA, July 14, 2009
- Mound Desert Island Biological Laboratory Stem Cell Symposium, Bar Harbor, ME, August 8, 2009
- Cancer Genetics Meeting, Jackson Laboratory, Bar Harbor, ME, August 23, 2009
- Next Generation Beta Cell Transplantation, NIH Campus, Bethesda, MD, November 9, 2009
- Invited Speaker, Humanized SCID mice in biomedical research, University of Alabama, Birmingham, AL, December 9, 2009
- Invited Speaker, Humanized SCID mice in translational biomedical research, Charité Campus Virchow-Klinikum, Universitätsmedizin Berlin, Molecular Basis of Clinical Variability in Mendelian Disorders, Max Planck Institut für Molekulare Genetik, Berlin, Germany, February 5, 2008
- Institute of Medical Genetics, Charité Berlin, Humboldt University, Leipzig, Germany, February 6, 2008
- Invited Speaker, Humanized SCID mice: A road well-traveled, Department of Pathology and Laboratory Medicine, Medical University of South Carolina, Charleston, SC, March 3, 2008
- Invited Speaker, Humanized SCID mice: A road well-traveled, 2nd Annual Meeting of Humanized SCID Mouse Models: Stem Cells, Cancer & Viral Pathogenesis, Geneva, NY, May 14, 2008
- Invited Speaker, Models for the in vivo functional analysis of mouse and human beta stem and progenitor cells, BCBC Investigator Retreat, Washington DC, May 18, 2008
- Invited Speaker, Humanized SCID mice: A road well-traveled, Discovery Strategies Conference: Modeling Human, Autoimmune Diseases in the Laboratory Rodent, The Jackson Laboratory, Bar Harbor, ME, May 28, 2008
- Juvenile Diabetes Research Foundation, Sponsored Workshop, New York, NY, June 17, 2008
- Invited Speaker, Humanized mouse models, 19th Annual NASA Space Radiation Investigators Workshop, Hyatt Regency Hotel, Penn’s Landing, Philadelphia, PA, July 1, 2008
- Invited Speaker, Overview of the development of humanized mice and their application in biomedical research, JDRF and Jackson Laboratory Workshop on “Beta Cell Development and Function in Mice Engrafted with Human Immune Systems” Bar Harbor, ME, August 3, 2008
- NIAID Dengue Virus Workshop, Washington, DC, Sept.19, 2008
- Humanized Mouse Model Meeting, Fort Detrick, MD, October 8, 2008
- Invited Speaker, Immunology of humanized mice, Translational Research in Immunology, The 38th Annual Meeting of the Japanese Society for Immunology, Kyoto, Japan, Dec 3, 2008

TEACHING EXPERIENCE

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| 1977-2004 | Annual Short Course on Medical and Experimental Mammalian Genetics, The Jackson Laboratory, Bar Harbor, ME |
| 1984 | Faculty of Bar Harbor Medical Symposium |
| 2005 | Discovery Strategies: Improving the Predictive Value of Mouse Models in Drug Discovery and Development, The Jackson Laboratory, Bar Harbor, ME |
| 2006 | Discovery Strategies: The Laboratory Mouse in Translational Cancer Research and Discovery, New York, NY |
| 2006-2007 | Annual Short Course on Experimental Genetics of the Laboratory Mouse in Cancer Research, The Jackson Laboratory, Bar Harbor, ME |
| 2006-2008 | Methods in Human Embryonic Stem Cell Research, The Jackson Laboratory, Bar Harbor, ME |
| 2007 | Discovery Strategies: Modeling Human Metabolic Syndrome and Type 2 Diabetes in Rodents, The Jackson Laboratory, Bar Harbor, ME |
| 2007 | Annual Workshop on the Pathology of Mouse Models for Human Disease, The Jackson |

Laboratory, Bar Harbor, ME

- 2007-2020 Annual Short Course on Experimental Models of Human Cancer, The Jackson Laboratory, Bar Harbor, ME
- 2008 Discovery Strategies: Modeling Human Autoimmune Diseases in the Laboratory Rodent, The Jackson Laboratory, Bar Harbor, ME
- 2009 Special Symposium presentation, Grand Opening of The Jackson Laboratory-West, Sacramento, CA
- 2010 Workshop on Animal Models for Human Stem Cell Therapy, The Jackson Laboratory, Bar Harbor, ME
- 2015 Workshop on Techniques in Modeling Human Cancer in Mice, The Jackson Laboratory, Bar Harbor, ME
- 2015 Organizer, Humanized Mice in Translational Research: Cancer, Diabetes and Beyond, The Jackson Laboratory, Bar Harbor, ME
- 2015-2018 Annual Short Course on Medical and Experimental Mammalian Genetics, The Jackson Laboratory, Bar Harbor, ME
- 2017 -2020 Human and Mammalian Genetics and Genomics: The McKusick Short Course

POST-DOCTORAL FELLOWS

- 1987-1989 Peter A. Schweitzer
- 1989-1991 Jane E. Disney
- 1991-1993 Sandra M. Hayes
- 1993-1996 Stephen C. Pelsue
- 1993-1996 Sean McKenna
- 1997-2000 Syuji Umeda
- 1998-2001 Melissa Relyea
- 1999-2002 Bonnie Lyons
- 2004-2005 Motonobu Ueno
- 2005-2009 Thomas Chase
- 2007-2009 Melissa Cox
- 2010-2014 Vishnu V. Hosur
- 2013-2016 Mohit Verma

GRADUATE STUDENTS/COLLEGE STUDENTS/SUMMER STUDENTS

- 1973 Peter J. Horneffer, Summer Student
- 1974 Susan B. Tarnofsky, Summer Student
- 1975 Carol J. Wright, Summer Student
- 1976 Debbie R. Cooper, Summer Student
- 1976 Cynthia L. Sammis, Summer Student
- 1977 Mary Ellen McCarthy, College Student
- 1978 Robert Q. Terrill, Summer Student
- 1980 Rose L. Glynne, Summer Student
- 1980 Rose Louise Morello, Summer Student
- 1981 Caroline M. Haas, College Student

1982	Kathleen A. Kaiser-Rogers, Summer Student
1983	Kelly K. Petrison, College Student
1984	Tracy Elizabeth Giordano, Summer Student
1985	Katherine S. Ullman, Summer Student
1986	Glenn Paradis, Summer Student
1987	Cheryl A. Skinner, Summer Student
1988	David W. Sehy, Summer Student
1988	Jennifer Winslow, Summer Student
1989	Debbie Chen, Summer Student
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1996	Rachel C. Kidman, Summer Student
1999	Chris Ahlers, Summer Student
2001	Jane Jih, Summer Student
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2006	Alex S. Burn, Summer Student
2008	Jennifer Margaret Wagner, Summer Student
2009	Erica Brown, Summer Student
2010	William Cheng, Summer Student
2011	Deidre Michaud, College Student
2012	Noah V. Lupica, Summer Student
2013	Chantal Barksdale, Summer Student
2014	Olivia A. Baranowski, Summer Student
2014	Paul C. Macklis, Summer Student
2015	Julia L. Clemens, Summer Student
2016	Cedric Lozano, Summer Student
2018	Ana Castaner, Summer Student

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