

CARVER COLLEGE OF MEDICINE CURRICULUM VITAE

Stanley Perlman

June 2022

I. EDUCATIONAL AND PROFESSIONAL HISTORY

A. List of institutions attended (earliest to most recent)

1968	AB (Physics) - University of Rochester, Rochester, New York
1972	PhD (Biophysics) - Massachusetts Institute of Technology, Cambridge, Massachusetts
1979	MD (Medicine) - University of Miami School of Medicine, Miami, Florida

Post Graduate

1972	Fellow - Massachusetts Institute of Technology, Cambridge, Massachusetts
1973	Fellow - Harvard University, Cambridge, Massachusetts
1973 - 1976	Fellow - University of Edinburgh, Edinburgh, Scotland
1976 - 1977	Fellow - Brandeis University, Waltham, Massachusetts
1979 - 1982	Resident - Children's Hospital Medical Center, Boston, Massachusetts
1981 - 1983	Fellow (Infectious Diseases) - Children's Hospital Medical Center, Boston, Massachusetts

Licensures

1982 - Present	Medical License, Massachusetts, Massachusetts
1983 - Present	Medical License, Iowa, Iowa

Certifications

1983 - Present	American Board of Pediatrics
----------------	------------------------------

B. Professional Development Activities

C. Employment History

1983 - 1988	Assistant Professor Department of Pediatrics, University of Iowa, Iowa City, Iowa
1992	Visiting Associate Member The Scripps Research Institute, La Jolla, California
1988 - 1993	Associate Professor Department of Microbiology, University of Iowa, Iowa City, Iowa
1988 - 1993	Associate Professor Department of Pediatrics, University of Iowa, Iowa City, Iowa
1988 - 1993	Associate Professor Neuroscience Program, University of Iowa, Iowa City, Iowa
1990 - 1993	Associate Professor Molecular Biology Program, University of Iowa, Iowa City, Iowa
1996 - 2005	Vice Chairman for Research

Stanley Perlman - June 2022

Department of Pediatrics, University of Iowa, Iowa City, Iowa

2004 - 2005	Visiting Professor University of Melbourne, Melbourne, Australia
2017 - 2020	Professor Guangzhou Medical University, Guangzhou, China
2020 - 2021	Mark Stinski Chair in Virology
1993 - Present	Professor Department of Microbiology and Immunology, University of Iowa, Iowa City, Iowa
1993 - Present	Professor Department of Pediatrics, University of Iowa, Iowa City, Iowa
1993 - Present	Professor Immunology Program, University of Iowa, Iowa City, Iowa
1993 - Present	Professor Neuroscience Program, University of Iowa, Iowa City, Iowa
2021 - Present	University of Iowa Distinguished Chair

D. Honors, Awards, Recognitions, Outstanding Achievements

1972	Sigma Xi
1972 - 1973	Fellow of The Jane Coffin Childs Foundation, New Haven, Connecticut
1973 - 1976	Fellow of the Helen Hay Whitney Foundation, New York, New York
1982 - 1983	Fellow of The Medical Foundation, Boston, Mass.
1984	Society for Pediatric Research
1986	Fellow, American Academy of Pediatrics
1992	Fellow, Infectious Diseases Society of America
1989 - 1994	NIH Research Career Development Award - NIH
1997	Member, American Pediatric Society
2010	Fellow, American Academy of Microbiology
2012	Fellow, American Association for the Advancement of Science
2013	Fellow, American Association of Physicians
2020	NASEM-U.S. China Gene Editing Technologies to Detect and Respond to Viral Pathogens
2020	NASEM-Virtual US China dialogue meeting <i>3 sessions-5/2020, 6/2020, 10/2020</i>
2020 - 2021	Mark Stinski Chair in Virology
2021	Iowa Regents Award for Faculty Excellence
2021	Leadership in Research Award - University of Iowa
2020 - 2024	Temporary government employee - COVID-19 vaccines on Vaccines and Related Biological Products Advisory Committee - US Food and Drug Administration
2020 - Present	Member of ACIP (Advisory Committee on Immunization Practices)

2021 - Present

University of Iowa Distinguished Chair

II. TEACHING

A. Teaching assignments

Classroom, Seminar, Teaching Laboratory

1997	Advanced Topics in Immunology <i>10 hours</i>
1997 - 1998	Undergraduate Virology Lab <i>Course Director</i>
1999	Lecture on meningitis <i>PA students</i>
2000	Microbiology Lab <i>Medical students</i>
1999 - 2002	Virus pathogenesis and molecular virology <i>1999, 2000, 2002 (10 hours each)</i>
2005	RNA viruses <i>10 hours</i>
1998 - 2009	Immunology II <i>1998 (7.5 hours), 1999 (7.5 hours), 2000 (Course co-director-6 hours), 2001 (Course director-6 hours), 2002 (Course director-7.5 hours), 2003 (Course director-7.5 hours), 2005 (Course co-director-4.5 hours), 2006 (Course co-director-4.5 hours), 2007 (Course co-director-7.5 hours), 2008 (Course director-7.5 hours), 2009 (Course director-7.5 hours)</i>
2010	Microbes in Our World <i>10 hours</i>
1999 - 2011	Small groups in immunology (medical students) <i>1999, 2000, 2001 (6 hours), 2002 (1 session), 2003 (5 hours), 2005 (6 hours), 2006 (6 hours), 2007 (6 hours), 2008 (6 hours), 2009 (6 hours), 2011</i>
2008 - 2012	Graduate Virology <i>2008, 2010, 2012 (10 hours each)</i>
2011 - 2012	Introduction to Animal Viruses Undergraduate Discussion <i>2011, 2012 (6 hours each)</i>

Stanley Perlman - June 2022

2012	Case Based Learning II <i>30 hours</i>
Fall 2016	Advanced Topics in Immunology, Team Teacher <i>15 hours</i>
2017 - 2018	Adv Prob Solv in Pharmacol Sci, Team Teacher <i>3 hours</i>
Fall 2017 - Fall 2018	Viruses and Human Disease, Team Teacher <i>6 hours each</i>
Spring 2017 - Spring 2022	Biology and Pathogenesis of Viruses, Course Director

Clinical Teaching

1998 - 2001	General pediatrics attending <i>1 month/yr</i>
1998 - 2001	Infectious diseases attending <i>6 months/yr</i>
2001 - 2006	Infectious diseases attending <i>2001-2004 (4 months/yr); 2004-2006 (6 months/yr)</i>

B. Student Supervision (* indicates chair of the committee)

Graduate Students

1990 - 1994	Edward Barnett - Graduate/Medical - MSTP/Neuroscience - MD/PhD
1991 - 1995	Ray Castro - Graduate/Medical - MSTP/Microbiology - MD/PhD
1995 - 1996	Kihong Li - Graduate - Microbiology
1994 - 1999	Shurong Xue - Graduate - Microbiology - PhD
1996 - 2000	Greg Wu - Graduate/Medical - MSTP/Neuroscience - MD/PhD
1997 - 2002	Jodie Haring - Graduate - Microbiology - PhD
1998 - 2003	Evi Ontiveros - Graduate - MSTP/Immunology - MD/PhD
2000 - 2004	Ajai Dandekar - Graduate/Medical - MSTP/Immunology - MD/PhD
2001 - 2004	Taeg Kim - Graduate - Immunology - PhD
2002 - 2007	Daniela Anghelina - Graduate - Neuroscience - PhD
2002 - 2007	Steven Templeton - Graduate - Immunology - PhD
2003 - 2007	Haixia Zhou - Graduate - Microbiology - PhD
2004 - 2007	Noah Butler - Graduate - Immunology - PhD
2005 - 2009	Jason Netland - Graduate - Microbiology - PhD
2007 - 2011	Kathryn Trandem - Graduate/Medical - MSTP/Immunology - MD/PhD

Stanley Perlman - June 2022

2008 - 2013	Jonathan Trujillo - Graduate/Medical - MSTP/Immunology - MD/PhD
2011 - 2016	Rahul Vijay - Graduate - Immunology - PhD
2012 - 2017	Dorthea Wheeler - Graduate/Medical - MSTP/Immunology - MD/PhD
2013 - 2017	Jeremiah Athmer - Graduate - Microbiology - PhD
2014 - 2019	Matthew Grunewald - Graduate/Medical - Microbiology/MSTP - MD/PhD
2015 - 2021	Alan Sariol - Graduate - Immunology - PhD
2019 - Present	Shea Lowery - Graduate - Microbiology - PhD

Master's Thesis Committee

2000	Michael Shey - Graduate - Microbiology - MS
2006	Kendra Mack - Graduate - Microbiology - MS
2004 - 2007	Brianne Ball - Graduate - Immunology - MS

Postdoctoral Fellow

1987 - 1990	Ann Louise Olson - Postdoctoral Fellow
1993 - 1996	Ning Sun - Postdoctoral Fellow
2007 - 2008	Haixia Zhou - Postdoctoral
2006 - 2009	Debra Ferraro - Postdoctoral Fellow
2007 - 2012	Jincun Zhao - Postdoctoral Fellow
2007 - 2012	Jingxian Zhao - Postdoctoral Fellow
2012 - 2017	Anthony Fehr - Postdoctoral Fellow
2012 - 2017	Rudragouda Channappanavar - Postdoctoral Fellow
2016 - 2020	Jian Zheng - Postdoctoral Fellow
2018 - 2021	Yuhang Wang - Postdoctoral Fellow
2017 - Present	Ruangang Pan - Postdoctoral Fellow
2018 - Present	Abhishek Verma - Postdoctoral Fellow
2019 - Present	Lok-Yin Roy Wong - Postdoctoral Fellow
2021 - Present	Alan Sariol - Postdoctoral Fellow
2021 - Present	Biyun Xue - Postdoctoral Fellow
2021 - Present	Pengfei Li - Postdoctoral Fellow

Research Assistant

2019 - 2020	Samantha Mackin - Research Assistant
2015 - Present	Kurt Bedell - Research Assistant
2020 - Present	Abby Odle - Research Assistant
2020 - Present	Molly Vickers - Research Assistant

Stanley Perlman - June 2022

Research Scientist

2012 - 2016	Jincun Zhao - Assistant Research Scientist
2012 - 2016	Jingxian Zhao - Assistant Research Scientist
2017 - 2018	Anthony Fehr - Assistant Research Scientist
2017 - 2018	Rudragouda Channappanavar - Assistant Research Scientist
2020 - Present	Jian Zheng - Assistant Research Scientist

Supervised Research

1984 - 1986	Mark Denison - Infectious Diseases Fellow
2013 - 2015	Xiaoyang Hua - Otolaryngology Resident

Thesis Committee

1986	Lung Chang - Graduate - Microbiology - PhD
1990	Dave Gretch - Graduate/Medical - MSTP/Microbiology - MD/PhD
1990	Stan Berberich - Graduate - Genetics - PhD
1985 - 1991	William Pruett - Graduate - Genetics - PhD <i>Deceased</i>
1991	Jim Mobley - Graduate - Microbiology - PhD
1993	John Knight - Graduate - Microbiology - PhD
1990 - 1994	*Edward Barnett - Graduate/Medical - MSTP/Neuroscience - MD/PhD
1994	Brad Amendt - Graduate - Microbiology - PhD
1994	Diana Pettit - Graduate - Neuroscience - PhD
1994	Jenny Miller - Graduate - Microbiology - PhD
1994	Mimi Macias - Graduate - Microbiology - PhD
1989 - 1995	Jim Shepherd - Graduate/Medical - MSTP/Microbiology - MD/PhD <i>Withdrew from PhD program</i>
1991 - 1995	*Ray Castro - Graduate/Medical - MSTP/Microbiology - MD/PhD
1995	Cheng Chao - Graduate - Microbiology - PhD
1995	Dana Grzybicki - Graduate - Neuroscience - PhD
1995	Lei Zhang - Graduate - Microbiology - PhD
1997	Yan Shi - Graduate - Immunology - PhD
1997	Zoya Kurago - Graduate - Immunology - PhD
1998	Zhihai Si - Graduate - Microbiology - PhD
1994 - 1999	*Shurong Xue - Graduate - Microbiology - PhD
1999	Shawn Rigby - Graduate - Microbiology - PhD
1996 - 2000	*Greg Wu - Graduate/Medical - MSTP/Neuroscience - MD/PhD

Stanley Perlman - June 2022

2000 Lyse Norian - Graduate - Immunology - PhD

2001 Aaron Bossler - Graduate/Medical - MSTP/Molecular & Cellular Biology - MD/PhD

2001 Amy Matthews
University of Pennsylvania

2001 Wei Guo - Graduate - Microbiology - PhD

1997 - 2002 *Jodie Haring - Graduate - Microbiology - PhD

2002 Kevin Brown - Graduate/Medical - MSTP/Immunology - MD/PhD

1998 - 2003 *Evi Ontiveros - Graduate - MSTP/Immunology - MD/PhD

2003 Jeff Domsic - Graduate - Molecular & Cellular Biology - PhD

2000 - 2004 *Ajai Dandekar - Graduate/Medical - MSTP/Immunology - MD/PhD

2001 - 2004 *Taeg Kim - Graduate - Immunology - PhD

2005 Gail Corbin - Graduate - Microbiology - PhD

2006 Brandon Porter - Graduate/Medical - MSTP/Immunology - MD/PhD

2006 Caitlin Bohlken - Graduate - Immunology - PhD

2002 - 2007 *Daniela Anghelina - Graduate - Neuroscience - PhD

2002 - 2007 *Steven Templeton - Graduate - Immunology - PhD

2003 - 2007 *Haixia Zhou - Graduate - Microbiology - PhD

2004 - 2007 *Noah Butler - Graduate - Immunology - PhD

2007 Ali Jabbari - Graduate/Medical - MSTP/Immunology - MD/PhD

2007 Becky Van Oosten - Graduate - Immunology - PhD

2008 Elaine Castilow - Graduate - Immunology - PhD

2008 G Sarikonda - Graduate - Immunology - PhD

2008 Matt Olson - Graduate - Microbiology - PhD

2008 Shilpi Verma - Graduate - Immunology - PhD

2005 - 2009 *Jason Netland - Graduate - Microbiology - PhD

2009 Colin Exline - Graduate - Microbiology - PhD

2010 Hannah Klein - Graduate/Medical - Neuroscience - MD/PhD

2010 Ryan Langlois - Graduate - Immunology - PhD

2010 Sarah Ingersoll - Graduate - Immunology - PhD

2007 - 2011 *Kathryn Trandem - Graduate/Medical - MSTP/Immunology - MD/PhD

2011 Jessica Haverkamp - Graduate - Immunology - PhD

2011 Kristen Ness - Graduate - Immunology - PhD

2011 Nhat-Long Pham - Graduate/Medical - MSTP/Immunology - MD/PhD

2012 Shyam Ramachandran - Graduate - Genetics - PhD

2008 - 2013 *Jonathan Trujillo - Graduate/Medical - MSTP/Immunology - MD/PhD

Stanley Perlman - June 2022

2011 - 2013	Michael Hayes - Graduate/Medical - MSTP/Biochemistry - MD/PhD
2013	Daniel McDermott - Graduate - Immunology - PhD
2013	Lindsey Brown Carlin - Graduate - Immunology - PhD
2010 - 2014	Kayla Weiss - Graduate - Immunology - PhD
2010 - 2014	Sven Moller-Tank - Graduate - Microbiology - PhD
2011 - 2015	Allison Christiaansen - Graduate - Microbiology - PhD
2011 - 2016	Ann Janowski - Graduate - Immunology - PhD
2011 - 2016	Katherine Doll - Graduate - Microbiology - PhD
2011 - 2016	Marie Kim - Graduate/Medical - MSTP/Immunology - MD/PhD
2011 - 2016	*Rahul Vijay - Graduate - Immunology - PhD
2012 - 2016	Michael Zhang - Graduate
2012 - 2017	*Dorthea Wheeler - Graduate/Medical - MSTP/Immunology - MD/PhD
2012 - 2017	Farah Itani - Graduate - Immunology - PhD
2013 - 2017	*Jeremiah Athmer - Graduate - Microbiology - PhD
2014 - 2019	*Matthew Grunewald - Graduate/Medical - Microbiology/MSTP - MD/PhD
2015 - 2021	*Alan Sariol - Graduate - Immunology - PhD
2018 - Present	Dana Bohan - Graduate - Immunology - PhD
2018 - Present	Laura Stephens - Graduate - Immunology - PhD
2019 - Present	Shaowen White - Graduate - Microbiology - PhD
2019 - Present	*Shea Lowery - Graduate - Microbiology - PhD
2020 - Present	Ivy Debreceni - Graduate - Immunology - PhD
2020 - Present	Merri-Grace Allred - Graduate - Immunology - PhD
2021 - Present	Samuel Connell - Graduate - Immunology - PhD

Undergraduate Student Staff

2018 - 2020	Mohamed Shaban - Undergraduate - Microbiology - BS
-------------	--

Undergraduate Students

2015 - 2017	Wen Qu - Undergraduate - Microbiology - BS
2019	Samantha Mackin - Undergraduate - Biochemistry - BS

C. Other Teaching Contributions

Institutional Conferences, Grand Rounds, Journal Clubs, Etc.

1998 - 2006	Pediatric Grand Rounds 1998, 2000, 2003, 2006
1983 - Present	Virology journal club

Local & Regional CME Talks

1999 CME course - HIV, Des Moines, IA

Other Teaching Contributions

1997 - 2005 Pediatric Research Day Organizer

III. SCHOLARSHIP/PROFESSIONAL PRODUCTIVITY

A. Publications or creative works (earliest to most recent)

Peer-reviewed papers and journal articles

1. **Perlman S**, Penman S. Protein-synthesizing structures associated with mitochondria, *Nature*. 1970 July 11;227(5254):133-7. PMID:4316951.
2. **Perlman S**, Penman S. Mitochondrial protein synthesis: Resistance to emetine and response to RNA synthesis inhibitors, *Biochem Biophys Res Commun*. 1970 August 24;40(4):941-8. PMID:5495740.
3. Zylber EA, **Perlman S**, Penman S. Mitochondrial RNA turnover in the presence of cordycepin, *Biochim Biophys Acta*. 1971 July 29;240(4):588-93. PMID:5315931.
4. **Perlman S**, Hirsch M, Penman S. Utilization of messenger in adenovirus-2-infected cells at normal and elevated temperatures, *Nat New Biol*. 1972 August 2;238(83):143-4. PMID:4506191.
5. **Perlman S**, Abelson HT, Penman S. Mitochondrial protein synthesis: RNA with the properties of Eukaryotic messenger RNA, *Proc Natl Acad Sci U S A*. 1973 February;70(2):350-3. PMID:4510280. PMCID: PMC433256.
6. **Perlman S**, Huang AS. Virus-Specific RNA Specified by the Group I and IV Temperature-Sensitive Mutants of Vesicular Stomatitis Virus, *Intervirology*. 1973;2(5-6):312-25.
7. **Perlman S**, Huang AS. RNA synthesis of vesicular stomatitis virus. V. Interactions between transcription and replication, *J Virol*. 1973 December;12(6):1395-400. PMID:4357512. PMCID: PMC356780.
8. Palma EL, **Perlman S**, Huang AS. Ribonucleic acid synthesis of vesicular stomatitis virus. VI. Correlation of defective particle RNA synthesis with standard RNA replication, *J Mol Biol*. 1974 May 5;85(1):127-36. PMID:4365257.
9. Bishop JO, Beckmann JS, Campo MS, Hastie ND, Izquierdo M, **Perlman S**. DNA-RNA hybridization, *Philos Trans R Soc Lond B Biol Sci*. 1975 November 6;272(915):147-57. PMID:1811.
10. **Perlman S**, Phillips C, Bishop JO. A study of foldback DNA, *Cell*. 1976 May;8(1):33-42. PMID:986250.
11. **Perlman S**, Ford PJ, Rosbash MM. Presence of tadpole and adult globin RNA sequences in oocytes of *Xenopus laevis*, *Proc Natl Acad Sci U S A*. 1977 September;74(9):3835-9. PMID:269434. PMCID: PMC431751.
12. **Perlman S**, Rosbash M. Analysis of *Xenopus laevis* ovary and somatic cell polyadenylated RNA by molecular hybridization, *Dev Biol*. 1978 March;63(1):197-212. PMID:564793.

Stanley Perlman - June 2022

13. Piccoli DA, **Perlman S**, Ephros M. Transfusion-acquired Plasmodium malariae infection in two premature infants, Pediatrics. 1983 October;72(4):560-2. PMID:6351009.
14. **Perlman S**, Carr SA. Citramalic acid in cerebrospinal fluid of patients with bacterial meningitis, Clin Chem. 1984 July;30(7):1209-12. PMID:6145530.
15. Broderick A, **Perlman S**, Dietz F. Pseudomonas bursitis: inoculation from a catfish, Pediatr Infect Dis. 1985 November;4(6):693-4. PMID:4080588.
16. Murph J, Bale JF, Murray J, Stinski MF, **Perlman S**. Cytomegalovirus transmission in a Midwest day care center: possible relationship to child care practices, J Pediatr. 1986 July;109(1):35-9. PMID:3014103.
17. Denison MR, **Perlman S**. Translation and processing of mouse hepatitis virus virion RNA in a cell-free system, J Virol. 1986 October;60(1):12-8. PMID:3018279. PMCID: PMC253896.
18. **Perlman S**, Ries D, Bolger E, Chang LJ, Stoltzfus CM. MHV nucleocapsid synthesis in the presence of cycloheximide and accumulation of negative strand MHV RNA, Virus Res. 1986 December;6(3):261-72. PMID:3033933.
19. Bale jr JF, O'Neil ME, Giller R, **Perlman S**, Koszinowski U. Murine cytomegalovirus genomic material in marrow cells: relation to altered leukocyte counts during sublethal infection of mice, J Infect Dis. 1987 February;155(2):207-12. PMID:3027192.
20. **Perlman S**, Schelper R, Bolger E, Ries D. Late onset, symptomatic, demyelinating encephalomyelitis in mice infected with MHV-JHM in the presence of maternal antibody, Microb Pathog. 1987 March;2(3):185-94. PMID:2853274.
21. Denison M, **Perlman S**. Identification of putative polymerase gene product in cells infected with murine coronavirus A59, Virology. 1987 April;157(2):565-8. PMID:3029990.
22. **Perlman S**, Ries D. The astrocyte is a target cell in mice persistently infected with mouse hepatitis virus, strain JHM, Microb Pathog. 1987 October;3(4):309-14. PMID:2849022.
23. **Perlman S**, Schelper R, Ries D. Maternal antibody-modulated MHV-JHM infection in C57BL/6 and BALB/c mice, Adv Exp Med Biol. 1987;218:297-305. PMID:2829543.
24. Denison M, **Perlman S**. Translation and processing of MHV-A59 virion RNA in reticulocyte lysates and infected cells, Adv Exp Med Biol. 1987;218:155-6. PMID:2829524.
25. Leibowitz JL, **Perlman S**, Weinstock G, DeVries JR, Budzilowicz C, Weissemann JM, Weiss SR. Detection of a murine coronavirus nonstructural protein encoded in a downstream open reading frame, Virology. 1988 May;164(1):156-64. PMID:2834866.
26. Denison M, **Perlman S**, Andersen RD. Misidentification of Neisseria species in a neonate with conjunctivitis, Pediatrics. 1988 June;81(6):877-8. PMID:3285316.
27. Kisker CT, **Perlman S**, Bohlken D, Wicklund B. Measurement of prothrombin mRNA during gestation and early neonatal development, J Lab Clin Med. 1988 October;112(4):407-12. PMID:2459278.
28. **Perlman S**, Jacobsen G, Moore S. Regional localization of virus in the central nervous system of mice persistently infected with murine coronavirus JHM, Virology. 1988 October;166(2):328-38. PMID:2845647.
29. **Perlman S**, Jacobsen G, Afifi A. Spread of a neurotropic murine coronavirus into the CNS via the trigeminal and olfactory nerves, Virology. 1989 June;170(2):556-60. PMID:2543129.

Stanley Perlman - June 2022

30. Van Dyke DC, Alexander RC, **Perlman S**, Smith WJ, Dekowski SA. Fusiform bacterial sepsis. Metastases with osteomyelitis and hepatic abscess occurring in a chaotic family, Clin Pediatr (Phila). 1989 September;28(9):423-5. PMID:2766646. doi: 10.1177/000992288902800910.
31. **Perlman S**, Jacobsen G, Olson AL, Afifi A. Identification of the spinal cord as a major site of persistence during chronic infection with a murine coronavirus, Virology. 1990 April;175(2):418-26. PMID:2158180.
32. Bale Jr JF, O'Neil ME, Lyon B, **Perlman S**. The pathogenesis of murine cytomegalovirus ocular infection. Anterior chamber inoculation, Invest Ophthalmol Vis Sci. 1990 August;31(8):1575-81. PMID:2167300.
33. Olson AL, **Perlman S**, Robillard JE. Developmental regulation of angiotensinogen gene expression in sheep, Pediatr Res. 1990 September;28(3):183-5. PMID:2235111. doi: 10.1203/00006450-199009000-00001.
34. **Perlman S**, Evans G, Afifi A. Effect of olfactory bulb ablation on spread of a neurotropic coronavirus into the mouse brain, J Exp Med. 1990 October 1;172(4):1127-32. PMID:1698910. PMCID: PMC2188595.
35. Olson AL, **Perlman S**, Robillard JE. Development regulation of angiotensinogen (Ao) gene expression in sheep, Pediatr Res. 1990;27(4, Part 2):235A.
36. Jacobsen G, **Perlman S**. Localization of virus and antibody response in mice infected persistently with MHV-JHM, Adv Exp Med Biol. 1990;276:573-8. PMID:1966451.
37. Olson AL, Robillard JE, Kisker CT, Smith BA, **Perlman S**. Negative regulation of angiotensinogen gene expression by glucocorticoids in fetal sheep liver, Pediatr Res. 1991 September;30(3):256-60. PMID:1945565. doi: 10.1203/00006450-199109000-00011.
38. Oleszak EL, **Perlman S**, Leibowitz JL. MHV S peplomer protein expressed by a recombinant vaccinia virus vector exhibits IgG Fc-receptor activity, Virology. 1992 January;186(1):122-32. PMID:1309271.
39. Page WV, **Perlman S**, Smith FG, Segar JL, Robillard JE. Renal nerves modulate kidney renin gene expression during the transition from fetal to newborn life, Am J Physiol. 1992 March;262(3 Pt 2):R459-63. PMID:1373041.
40. Mobley J, Evans G, Dailey MO, **Perlman S**. Immune response to a murine coronavirus: identification of a homing receptor-negative CD4+ T cell subset that responds to viral glycoproteins, Virology. 1992 April;187(2):443-52. PMID:1347668.
41. Denison MR, Zoltick PW, Hughes SA, Giangreco B, Olson AL, **Perlman S**, Leibowitz JL, Weiss SR. Intracellular processing of the N-terminal ORF 1a proteins of the coronavirus MHV-A59 requires multiple proteolytic events, Virology. 1992 July;189(1):274-84. PMID:1318604.
42. Gallagher TM, Buchmeier MJ, **Perlman S**. Cell receptor-independent infection by a neurotropic murine coronavirus, Virology. 1992 November;191(1):517-22. PMID:1413526.
43. Barnett EM, **Perlman S**. The olfactory nerve and not the trigeminal nerve is the major site of CNS entry for mouse hepatitis virus, strain JHM, Virology. 1993 May;194(1):185-91. PMID:8386871. doi: 10.1006/viro.1993.1248.
44. Gallagher TM, Buchmeier MJ, **Perlman S**. Dissemination of MHV4 (strain JHM) infection does not require specific coronavirus receptors, Adv Exp Med Biol. 1993;342:279-84. PMID:8209743.

Stanley Perlman - June 2022

45. Oleszak EL, **Perlman S**, Parr R, Collisson EW, Leibowitz JL. Molecular mimicry between S peplomer proteins of coronaviruses (MHV, BCV, TGEV and IBV) and Fc receptor, *Adv Exp Med Biol.* 1993;342:183-8. PMID:8209728.
46. **Perlman S**, Barnett E, Jacobsen G. Mouse hepatitis virus and herpes simplex virus move along different CNS pathways, *Adv Exp Med Biol.* 1993;342:313-8. PMID:7516106.
47. Chung S, Li C, Fung LS, Crow A, Gorczynski R, Cole E, **Perlman S**, Leibowitz J, Levy G. Role of macrophage procoagulant activity in mouse hepatitis virus (MHV) infection: studies using T cell MHV-3 clones and monoclonal antibody 3D4.3, *Adv Exp Med Biol.* 1993;342:377-84. PMID:8209757.
48. Barnett EM, Cassell MD, **Perlman S**. Two neurotropic viruses, herpes simplex virus type 1 and mouse hepatitis virus, spread along different neural pathways from the main olfactory bulb, *Neuroscience.* 1993 December;57(4):1007-25. PMID:8309541.
49. Barnett EM, Jacobsen G, Evans G, Cassell M, **Perlman S**. Herpes simplex encephalitis in the temporal cortex and limbic system after trigeminal nerve inoculation, *J Infect Dis.* 1994 April;169(4):782-6. PMID:8133092.
50. Castro RF, Evans GD, Jaszewski A, **Perlman S**. Coronavirus-induced demyelination occurs in the presence of virus-specific cytotoxic T cells, *Virology.* 1994 May 1;200(2):733-43. PMID:8178457. doi: 10.1006/viro.1994.1237.
51. Chung S, Gorczynski R, Cruz B, Fingerote R, Skamene E, **Perlman S**, Leibowitz J, Fung L, Flowers M, Levy G. A Th1 cell line (3E9.1) from resistant A/J mice inhibits induction of macrophage procoagulant activity in vitro and protects against MHV-3 mortality in vivo, *Immunology.* 1994 November;83(3):353-61. PMID:7835959. PMCID: PMC1415033.
52. Pettit DL, **Perlman S**, Malinow R. Potentiated transmission and prevention of further LTP by increased CaMKII activity in postsynaptic hippocampal slice neurons, *Science.* 1994 December 16;266(5192):1881-5. PMID:7997883.
53. Sun N, **Perlman S**. Spread of a neurotropic coronavirus to spinal cord white matter via neurons and astrocytes, *J Virol.* 1995 February;69(2):633-41. PMID:7815526. PMCID: PMC188623.
54. Xue S, Jaszewski A, **Perlman S**. Identification of a CD4+ T cell epitope within the M protein of a neurotropic coronavirus, *Virology.* 1995 April 1;208(1):173-9. PMID:11831697. doi: 10.1006/viro.1995.1140.
55. Barnett EM, Evans GD, Sun N, **Perlman S**, Cassell MD. Anterograde tracing of trigeminal afferent pathways from the murine tooth pulp to cortex using herpes simplex virus type 1, *J Neurosci.* 1995 April;15(4):2972-84. PMID:7536824.
56. Sun N, Grzybicki D, Castro RF, Murphy S, **Perlman S**. Activation of astrocytes in the spinal cord of mice chronically infected with a neurotropic coronavirus, *Virology.* 1995 November 10;213(2):482-93. PMID:7491773. doi: 10.1006/viro.1995.0021.
57. Smith EM, Johnson SR, Cripe T, **Perlman S**, McGuinness G, Jiang D, Cripe L, Turek LP. Perinatal transmission and maternal risks of human papillomavirus infection, *Cancer Detect Prev.* 1995;19(2):196-205. PMID:7750107.
58. **Perlman S**, Sun N, Barnett EM. Spread of MHV-JHM from nasal cavity to white matter of spinal cord. Transneuronal movement and involvement of astrocytes, *Adv Exp Med Biol.* 1995;380:73-8. PMID:8830549.

Stanley Perlman - June 2022

59. Castro RF, **Perlman S**. CD8+ T-cell epitopes within the surface glycoprotein of a neurotropic coronavirus and correlation with pathogenicity, *J Virol*. 1995 December;69(12):8127-31. PMID:7494335. PMCID: PMC189767.
60. Castro RF, **Perlman S**. Differential antigen recognition by T cells from the spleen and central nervous system of coronavirus-infected mice, *Virology*. 1996 August 1;222(1):247-51. PMID:8806504. doi: 10.1006/viro.1996.0415.
61. Sun N, Cassell MD, **Perlman S**. Anterograde, transneuronal transport of herpes simplex virus type 1 strain H129 in the murine visual system, *J Virol*. 1996 August;70(8):5405-13. PMID:8764051. PMCID: PMC190498.
62. Pewe L, Wu GF, Barnett EM, Castro RF, **Perlman S**. Cytotoxic T cell-resistant variants are selected in a virus-induced demyelinating disease, *Immunity*. 1996 September;5(3):253-62. PMID:8808680.
63. Grzybicki DM, Kwack KB, **Perlman S**, Murphy SP. Nitric oxide synthase type II expression by different cell types in MHV-JHM encephalitis suggests distinct roles for nitric oxide in acute versus persistent virus infection, *J Neuroimmunol*. 1997 March;73(1-2):15-27. PMID:9058755.
64. Pewe L, Xue S, **Perlman S**. Cytotoxic T-cell-resistant variants arise at early times after infection in C57BL/6 but not in SCID mice infected with a neurotropic coronavirus, *J Virol*. 1997 October;71(10):7640-7. PMID:9311846. PMCID: PMC192113.
65. Xue S, **Perlman S**. Antigen specificity of CD4 T cell response in the central nervous system of mice infected with mouse hepatitis virus, *Virology*. 1997 November 10;238(1):68-78. PMID:9375010. doi: 10.1006/viro.1997.8819.
66. Pewe L, Xue S, **Perlman S**. Infection with cytotoxic T-lymphocyte escape mutants results in increased mortality and growth retardation in mice infected with a neurotropic coronavirus, *J Virol*. 1998 July;72(7):5912-8. PMID:9621053. PMCID: PMC110395.
67. LaBrecque FD, LaBrecque DR, Klinzman D, **Perlman S**, Cederna JB, Winokur PL, Han JQ, Stapleton JT. Recombinant hepatitis A virus antigen: improved production and utility in diagnostic immunoassays, *J Clin Microbiol*. 1998 July;36(7):2014-8. PMID:9650953. PMCID: PMC104969.
68. **Perlman S**, Pewe L. Role of CTL mutants in demyelination induced by mouse hepatitis virus, strain JHM, *Adv Exp Med Biol*. 1998;440:515-9. PMID:9782323.
69. Pewe L, **Perlman S**. Immune response to the immunodominant epitope of mouse hepatitis virus is polyclonal, but functionally monospecific in C57Bl/6 mice, *Virology*. 1999 March 1;255(1):106-16. PMID:10049826. doi: 10.1006/viro.1998.9576.
70. Xue S, Sun N, Van Rooijen N, **Perlman S**. Depletion of blood-borne macrophages does not reduce demyelination in mice infected with a neurotropic coronavirus, *J Virol*. 1999 August;73(8):6327-34. PMID:10400724. PMCID: PMC112711.
71. Wu GF, **Perlman S**. Macrophage infiltration, but not apoptosis, is correlated with immune-mediated demyelination following murine infection with a neurotropic coronavirus, *J Virol*. 1999 October;73(10):8771-80. PMID:10482631. PMCID: PMC112898.
72. Rakasz E, Mueller A, **Perlman S**, Lynch RG. Gammadelta T cell response induced by vaginal Herpes simplex 2 infection, *Immunol Lett*. 1999 November 1;70(2):89-93. PMID:10569697.
73. Pewe L, Heard SB, Bergmann C, Dailey MO, **Perlman S**. Selection of CTL escape mutants in mice infected with a neurotropic coronavirus: quantitative estimate of TCR

Stanley Perlman - June 2022

- diversity in the infected central nervous system, *J Immunol.* 1999 December 1;163(11):6106-13. PMID:10570300.
74. Wu GF, Dandekar AA, Pewe L, **Perlman S.** CD4 and CD8 T cells have redundant but not identical roles in virus-induced demyelination, *J Immunol.* 2000 August 15;165(4):2278-86. PMID:10925317.
75. Wu GF, Pewe L, **Perlman S.** Coronavirus-induced demyelination occurs in the absence of inducible nitric oxide synthase, *J Virol.* 2000 August;74(16):7683-6. PMID:10906226. PMCID: PMC112293.
76. Wang G, Deering C, Macke M, Shao J, Burns R, Blau DM, Holmes KV, Davidson BL, **Perlman S,** McCray P. Human coronavirus 229E infects polarized airway epithelia from the apical surface, *J Virol.* 2000 October;74(19):9234-9. PMID:10982370. PMCID: PMC102122.
77. Haring JS, Pewe LL, **Perlman S.** High-magnitude, virus-specific CD4 T-cell response in the central nervous system of coronavirus-infected mice, *J Virol.* 2001 March;75(6):3043-7. PMID:11222733. PMCID: PMC115934. doi: 10.1128/JVI.75.6.3043-3047.2001.
78. Kolb AF, Pewe L, Webster J, **Perlman S,** Whitelaw CB, Siddell SG. Virus-neutralizing monoclonal antibody expressed in milk of transgenic mice provides full protection against virus-induced encephalitis, *J Virol.* 2001 March;75(6):2803-9. PMID:11222704. PMCID: PMC115905. doi: 10.1128/JVI.75.6.2803-2809.2001.
79. Dandekar AA, Wu GF, Pewe L, **Perlman S.** Axonal damage is T cell mediated and occurs concomitantly with demyelination in mice infected with a neurotropic coronavirus, *J Virol.* 2001 July;75(13):6115-20. PMID:11390613. PMCID: PMC114327. doi: 10.1128/JVI.75.13.6115-6120.2001.
80. Ontiveros E, Kuo L, Masters PS, **Perlman S.** Inactivation of expression of gene 4 of mouse hepatitis virus strain JHM does not affect virulence in the murine CNS, *Virology.* 2001 October 25;289(2):230-8. PMID:11689046. doi: 10.1006/viro.2001.1167.
81. Ontiveros E, Kuo L, Masters P, **Perlman S.** Analysis of nonessential gene function in recombinant MHV-JHM. Gene 4 knockout recombinant virus, *Adv Exp Med Biol.* 2001;494:83-9. PMID:11774550.
82. Wu GF, Dandekar AA, Pewe L, **Perlman S.** The role of CD4 and CD8 T cells in MHV-JHM-induced demyelination, *Adv Exp Med Biol.* 2001;494:341-7. PMID:11774490.
83. Pewe L, **Perlman S.** Cutting edge: CD8 T cell-mediated demyelination is IFN-gamma dependent in mice infected with a neurotropic coronavirus, *J Immunol.* 2002 February 15;168(4):1547-51. PMID:11823480.
84. Pewe L, Haring J, **Perlman S.** CD4 T-cell-mediated demyelination is increased in the absence of gamma interferon in mice infected with mouse hepatitis virus, *J Virol.* 2002 July;76(14):7329-33. PMID:12072531. PMCID: PMC136326.
85. Haring JS, Pewe LL, **Perlman S.** Bystander CD8 T cell-mediated demyelination after viral infection of the central nervous system, *J Immunol.* 2002 August 1;169(3):1550-5. PMID:12133983.
86. Dandekar AA, **Perlman S.** Virus-induced demyelination in nude mice is mediated by gamma delta T cells, *Am J Pathol.* 2002 October;161(4):1255-63. PMID:12368199. PMCID: PMC1867296.
87. Haring JS, **Perlman S.** Bystander CD4 T cells do not mediate demyelination in mice infected with a neurotropic coronavirus, *J Neuroimmunol.* 2003 April;137(1-2):42-50. PMID:12667646.

Stanley Perlman - June 2022

88. Kim TS, **Perlman S**. Protection against CTL escape and clinical disease in a murine model of virus persistence, *J Immunol*. 2003 August 15;171(4):2006-13. PMID:12902505.
89. Ontiveros E, Kim TS, Gallagher TM, **Perlman S**. Enhanced virulence mediated by the murine coronavirus, mouse hepatitis virus strain JHM, is associated with a glycine at residue 310 of the spike glycoprotein, *J Virol*. 2003 October;77(19):10260-9. PMID:12970410. PMCID: PMC228498.
90. Dandekar AA, Jacobsen G, Waldschmidt TJ, **Perlman S**. Antibody-mediated protection against cytotoxic T-cell escape in coronavirus-induced demyelination, *J Virol*. 2003 November;77(22):11867-74. PMID:14581523. PMCID: PMC254260.
91. Dandekar AA, Anghelina D, **Perlman S**. Bystander CD8 T-cell-mediated demyelination is interferon-gamma-dependent in a coronavirus model of multiple sclerosis, *Am J Pathol*. 2004 February;164(2):363-9. PMID:14742242. PMCID: PMC1602263.
92. Pewe LL, Netland JM, Heard SB, **Perlman S**. Very diverse CD8 T cell clonotypic responses after virus infections, *J Immunol*. 2004 March 1;172(5):3151-6. PMID:14978121.
93. Kim TS, **Perlman S**. Virus-specific antibody, in the absence of T cells, mediates demyelination in mice infected with a neurotropic coronavirus, *Am J Pathol*. 2005 March;166(3):801-9. PMID:15743792. PMCID: PMC1602352. doi: 10.1016/S0002-9440(10)62301-2.
94. Kim TS, **Perlman S**. Viral expression of CCL2 is sufficient to induce demyelination in RAG1-/- mice infected with a neurotropic coronavirus, *J Virol*. 2005 June;79(11):7113-20. PMID:15890951. PMCID: PMC1112157. doi: 10.1128/JVI.79.11.7113-7120.2005.
95. Dandekar AA, O'Malley K, **Perlman S**. Important roles for gamma interferon and NKG2D in gammadelta T-cell-induced demyelination in T-cell receptor beta-deficient mice infected with a coronavirus, *J Virol*. 2005 August;79(15):9388-96. PMID:16014902. PMCID: PMC1181615. doi: 10.1128/JVI.79.15.9388-9396.2005.
96. Pewe L, Zhou H, Netland J, Tangudu C, Olivares H, Shi L, Look DC, Gallagher T, **Perlman S**. A severe acute respiratory syndrome-associated coronavirus-specific protein enhances virulence of an attenuated murine coronavirus, *J Virol*. 2005 September;79(17):11335-42. PMID:16103185. PMCID: PMC1193615. doi: 10.1128/JVI.79.17.11335-11342.2005.
97. Jia HP, LOOK DC, Shi L, Hickey M, Pewe L, Netland J, Farzan M, Wohlford-Lenane C, **Perlman S**, McCray P. ACE2 receptor expression and severe acute respiratory syndrome coronavirus infection depend on differentiation of human airway epithelia, *J Virol*. 2005 December;79(23):14614-21. PMID:16282461. PMCID: PMC1287568. doi: 10.1128/JVI.79.23.14614-14621.2005.
98. Zhou H, **Perlman S**. Preferential infection of mature dendritic cells by mouse hepatitis virus strain JHM, *J Virol*. 2006 March;80(5):2506-14. PMID:16474157. PMCID: PMC1395395. doi: 10.1128/JVI.80.5.2506-2514.2006.
99. Butler N, Pewe L, Trandem K, **Perlman S**. Murine encephalitis caused by HCoV-OC43, a human coronavirus with broad species specificity, is partly immune-mediated, *Virology*. 2006 April 10;347(2):410-21. PMID:16413043. doi: 10.1016/j.virol.2005.11.044.
100. Anghelina D, Pewe L, **Perlman S**. Pathogenic role for virus-specific CD4 T cells in mice with coronavirus-induced acute encephalitis, *Am J Pathol*. 2006 July;169(1):209-22. PMID:16816374. PMCID: PMC1698761. doi: 10.2353/ajpath.2006.051308.

Stanley Perlman - June 2022

101. Kedzierska K, Day EB, Pi J, Heard SB, Doherty TC, Turner SJ, **Perlman S**. Quantification of repertoire diversity of influenza-specific epitopes with predominant public or private TCR usage, *J Immunol*. 2006 November 15;177(10):6705-12. PMID:17082583.
102. Pewe L, Zhou H, Netland J, Tangadu C, Olivares H, Shi L, Look DC, Gallagher T, **Perlman S**. A SARS-CoV-specific protein enhances virulence of an attenuated strain of mouse hepatitis virus, *Adv Exp Med Biol*. 2006;581:493-8. PMID:17037583. doi: 10.1007/978-0-387-33012-9_87.
103. Butler N, Pewe L, Trandem K, **Perlman S**. HCoV-OC43-induced encephalitis is in part immune-mediated, *Adv Exp Med Biol*. 2006;581:531-4. PMID:17037592. doi: 10.1007/978-0-387-33012-9_96.
104. Jia HP, Look DC, Hickey M, Shi L, Pewe L, Netland J, Farzan M, Wohlford-Lenane C, **Perlman S**, McCray P. Infection of human airway epithelia by SARS coronavirus is associated with ACE2 expression and localization, *Adv Exp Med Biol*. 2006;581:479-84. PMID:17037581. doi: 10.1007/978-0-387-33012-9_85.
105. Zhou H, **Perlman S**. Preferential infection of mature dendritic cells by the JHM strain of mouse hepatitis virus, *Adv Exp Med Biol*. 2006;581:411-4. PMID:17037570. doi: 10.1007/978-0-387-33012-9_74.
106. McCray P, Pewe L, Wohlford-Lenane C, Hickey M, Manzel L, Shi L, Netland J, Jia HP, Halabi C, Sigmund CD, Meyerholz D, Kirby PA, Look DC, **Perlman S**. Lethal infection of K18-hACE2 mice infected with severe acute respiratory syndrome coronavirus, *J Virol*. 2007 January;81(2):813-21. PMID:17079315. PMCID: PMC1797474. doi: 10.1128/JVI.02012-06.
107. Zhou H, **Perlman S**. Mouse hepatitis virus does not induce Beta interferon synthesis and does not inhibit its induction by double-stranded RNA, *J Virol*. 2007 January;81(2):568-74. PMID:17079305. PMCID: PMC1797428. doi: 10.1128/JVI.01512-06.
108. Tangadu C, Olivares H, Netland J, **Perlman S**, Gallagher T. Severe acute respiratory syndrome coronavirus protein 6 accelerates murine coronavirus infections, *J Virol*. 2007 February;81(3):1220-9. PMID:17108045. PMCID: PMC1797517. doi: 10.1128/JVI.01515-06.
109. Netland J, Ferraro D, Pewe L, Olivares H, Gallagher T, **Perlman S**. Enhancement of murine coronavirus replication by severe acute respiratory syndrome coronavirus protein 6 requires the N-terminal hydrophobic region but not C-terminal sorting motifs, *J Virol*. 2007 October;81(20):11520-5. PMID:17670827. PMCID: PMC2045524. doi: 10.1128/JVI.01308-07.
110. Bonthius D, **Perlman S**. Congenital viral infections of the brain: lessons learned from lymphocytic choriomeningitis virus in the neonatal rat, *PLoS Pathog*. 2007 November;3(11):e149. PMID:18052527. PMCID: PMC2092377. doi: 10.1371/journal.ppat.0030149.
111. Butler NS, Dandekar AA, **Perlman S**. Antiviral antibodies are necessary to prevent cytotoxic T-lymphocyte escape in mice infected with a coronavirus, *J Virol*. 2007 December;81(24):13291-8. PMID:17913802. PMCID: PMC2168833. doi: 10.1128/JVI.01580-07.
112. Templeton SP, Kim TS, O'Malley K, **Perlman S**. Maturation and localization of macrophages and microglia during infection with a neurotropic murine coronavirus, *Brain Pathol*. 2008 January;18(1):40-51. PMID:17935605. doi: 10.1111/j.1750-3639.2007.00098.x.

Stanley Perlman - June 2022

113. Templeton SP, **Perlman S**. Role of IFN-gamma responsiveness in CD8 T-cell-mediated viral clearance and demyelination in coronavirus-infected mice, *J Neuroimmunol*. 2008 February;194(1-2):18-26. PMID:18082272. doi: 10.1016/j.jneuroim.2007.10.030.
114. Butler NS, Theodossis A, Webb AI, Dunstone MA, Nastovska R, Ramarathinam SH, Rossjohn J, Purcell AW, **Perlman S**. Structural and biological basis of CTL escape in coronavirus-infected mice, *J Immunol*. 2008 March 15;180(6):3926-37. PMID:18322201.
115. Dediego ML, Pewe L, Alvarez E, Rejas MT, **Perlman S**, Enjuanes L. Pathogenicity of severe acute respiratory coronavirus deletion mutants in hACE-2 transgenic mice, *Virology*. 2008 July 5;376(2):379-89. PMID:18452964. PMCID: PMC2810402. doi: 10.1016/j.virol.2008.03.005.
116. Hussain S, **Perlman S**, Gallagher TM. Severe acute respiratory syndrome coronavirus protein 6 accelerates murine hepatitis virus infections by more than one mechanism, *J Virol*. 2008 July;82(14):7212-22. PMID:18448520. PMCID: PMC2446958. doi: 10.1128/JVI.02406-07.
117. Netland J, Meyerholz D, Moore S, Cassell M, **Perlman S**. Severe acute respiratory syndrome coronavirus infection causes neuronal death in the absence of encephalitis in mice transgenic for human ACE2, *J Virol*. 2008 August;82(15):7264-75. PMID:18495771. PMCID: PMC2493326. doi: 10.1128/JVI.00737-08.
118. Butler NS, Theodossis A, Webb AI, Nastovska R, Ramarathinam SH, Dunstone MA, Rossjohn J, Purcell AW, **Perlman S**. Prevention of cytotoxic T cell escape using a heteroclitic subdominant viral T cell determinant, *PLoS Pathog*. 2008 October;4(10):e1000186. PMID:18949029. PMCID: PMC2563037. doi: 10.1371/journal.ppat.1000186.
119. Whitman L, Zhou H, **Perlman S**, Lane TE. IFN-gamma-mediated suppression of coronavirus replication in glial-committed progenitor cells, *Virology*. 2009 February 5;384(1):209-15. PMID:19059617. PMCID: PMC2779567. doi: 10.1016/j.virol.2008.10.036.
120. Anghelina D, Zhao J, Trandem K, **Perlman S**. Role of regulatory T cells in coronavirus-induced acute encephalitis, *Virology*. 2009 March 15;385(2):358-67. PMID:19141357. PMCID: PMC2684864. doi: 10.1016/j.virol.2008.12.014.
121. Zhao J, Falcón A, Zhou H, Netland J, Enjuanes L, Pérez Breña P, **Perlman S**. Severe acute respiratory syndrome coronavirus protein 6 is required for optimal replication, *J Virol*. 2009 March;83(5):2368-73. PMID:19091867. PMCID: PMC2643704. doi: 10.1128/JVI.02371-08.
122. Enquist LW, Editors of the Journal of Virology, **Perlman S**. *Virology in the 21st century*, *J Virol*. 2009 June;83(11):5296-308. PMID:19297504. PMCID: PMC2681991. doi: 10.1128/JVI.00151-09.
123. Zhao J, Zhao J, **Perlman S**. De novo recruitment of antigen-experienced and naive T cells contributes to the long-term maintenance of antiviral T cell populations in the persistently infected central nervous system, *J Immunol*. 2009 October 15;183(8):5163-70. PMID:19786545. PMCID: PMC2811315. doi: 10.4049/jimmunol.0902164.
124. Zhao J, Zhao J, Van Rooijen N, **Perlman S**. Evasion by stealth: inefficient immune activation underlies poor T cell response and severe disease in SARS-CoV-infected mice, *PLoS Pathog*. 2009 October;5(10):e1000636. PMID:19851468. PMCID: PMC2762542. doi: 10.1371/journal.ppat.1000636.
125. Wohlford-Lenane CL, Meyerholz D, **Perlman S**, Zhou H, Tran D, Selsted ME, McCray P. Rhesus theta-defensin prevents death in a mouse model of severe acute respiratory

Stanley Perlman - June 2022

- syndrome coronavirus pulmonary disease, *J Virol.* 2009 November;83(21):11385-90. PMID:19710146. PMCID: PMC2772759. doi: 10.1128/JVI.01363-09.
126. Netland J, DeDiego ML, Zhao J, Fett C, Alvarez E, Nieto-Torres JL, Enjuanes L, **Perlman S**. Immunization with an attenuated severe acute respiratory syndrome coronavirus deleted in E protein protects against lethal respiratory disease, *Virology.* 2010 March 30;399(1):120-8. PMID:20110095. PMCID: PMC2830353. doi: 10.1016/j.virol.2010.01.004.
 127. Trandem K, Anghelina D, Zhao J, **Perlman S**. Regulatory T cells inhibit T cell proliferation and decrease demyelination in mice chronically infected with a coronavirus, *J Immunol.* 2010 April 15;184(8):4391-400. PMID:20208000. PMCID: PMC2851486. doi: 10.4049/jimmunol.0903918.
 128. Zhou H, Ferraro D, Zhao J, Hussain S, Shao J, Trujillo J, Netland J, Gallagher T, **Perlman S**. The N-terminal region of severe acute respiratory syndrome coronavirus protein 6 induces membrane rearrangement and enhances virus replication, *J Virol.* 2010 April;84(7):3542-51. PMID:20106914. PMCID: PMC2838104. doi: 10.1128/JVI.02570-09.
 129. Zhao J, Zhao J, **Perlman S**. T cell responses are required for protection from clinical disease and for virus clearance in severe acute respiratory syndrome coronavirus-infected mice, *J Virol.* 2010 September;84(18):9318-25. PMID:20610717. PMCID: PMC2937604. doi: 10.1128/JVI.01049-10.
 130. Zhou H, Zhao J, **Perlman S**. Autocrine interferon priming in macrophages but not dendritic cells results in enhanced cytokine and chemokine production after coronavirus infection, *MBio.* 2010 October 19;1(4):e00219-10. PMID:20978536. PMCID: PMC2957079. doi: 10.1128/mBio.00219-10.
 131. Shulla A, Heald-Sargent T, Subramanya G, Zhao J, **Perlman S**, Gallagher T. A transmembrane serine protease is linked to the severe acute respiratory syndrome coronavirus receptor and activates virus entry, *J Virol.* 2011 January;85(2):873-82. PMID:21068237. PMCID: PMC3020023. doi: 10.1128/JVI.02062-10.
 132. Trandem K, Zhao J, Fleming E, **Perlman S**. Highly activated cytotoxic CD8 T cells express protective IL-10 at the peak of coronavirus-induced encephalitis, *J Immunol.* 2011 March 15;186(6):3642-52. PMID:21317392. PMCID: PMC3063297. doi: 10.4049/jimmunol.1003292.
 133. Trandem K, Jin Q, Weiss KA, James BR, Zhao J, **Perlman S**. Virally expressed interleukin-10 ameliorates acute encephalomyelitis and chronic demyelination in coronavirus-infected mice, *J Virol.* 2011 July;85(14):6822-31. PMID:21593179. PMCID: PMC3126551. doi: 10.1128/JVI.00510-11.
 134. Zhao J, Zhao J, Fett C, Trandem K, Fleming E, **Perlman S**. IFN- γ - and IL-10-expressing virus epitope-specific Foxp3(+) T reg cells in the central nervous system during encephalomyelitis, *J Exp Med.* 2011 August 1;208(8):1571-7. PMID:21746812. PMCID: PMC3149215. doi: 10.1084/jem.20110236.
 135. DeDiego ML, Nieto-Torres JL, Jiménez-Guardeño JM, Regla-Nava JA, Alvarez E, Oliveros JC, Zhao J, Fett C, **Perlman S**, Enjuanes L. Severe acute respiratory syndrome coronavirus envelope protein regulates cell stress response and apoptosis, *PLoS Pathog.* 2011 October;7(10):e1002315. PMID:22028656. PMCID: PMC3197621. doi: 10.1371/journal.ppat.1002315.
 136. Zhao J, Zhao J, Legge K, **Perlman S**. Age-related increases in PGD(2) expression impair respiratory DC migration, resulting in diminished T cell responses upon

Stanley Perlman - June 2022

- respiratory virus infection in mice, *J Clin Invest*. 2011 December;121(12):4921-30. PMID:22105170. PMCID: PMC3226008. doi: 10.1172/JCI59777.
137. Zhao J, Wohlford-Lenane C, Zhao J, Fleming E, Lane TE, McCray PB J, **Perlman S**. Intranasal treatment with poly(I•C) protects aged mice from lethal respiratory virus infections, *J Virol*. 2012 November;86(21):11416-24. PMID:22915814. PMCID: PMC3486278. doi: 10.1128/JVI.01410-12.
 138. Zhao J, Zhao J, **Perlman S**. Differential effects of IL-12 on Tregs and non-Treg T cells: roles of IFN- γ , IL-2 and IL-2R, *PLoS One*. 2012;7(9):e46241. PMID:23029447. PMCID: PMC3459844. doi: 10.1371/journal.pone.0046241.
 139. Trujillo JA, Fleming EL, **Perlman S**. Transgenic CCL2 Expression in the Central Nervous System Results in a Dysregulated Immune Response and Enhanced Lethality after Coronavirus Infection, *J Virol*. 2013 March;87(5):2376-89. PMID:23269787. PMCID: PMC3571407. doi: 10.1128/JVI.03089-12.
 140. Fett C, DeDiego ML, Regla-Nava JA, Enjuanes L, **Perlman S**. Complete protection against severe acute respiratory syndrome coronavirus-mediated lethal respiratory disease in aged mice by immunization with a mouse-adapted virus lacking E protein, *J Virol*. 2013 June;87(12):6551-9. PMID:23576515. PMCID: PMC3676143. doi: 10.1128/JVI.00087-13.
 141. Chen IJ, Yuann JM, Chang YM, Lin SY, Zhao J, **Perlman S**, Shen YY, Huang TH, Hou MH. Crystal structure-based exploration of the important role of Arg106 in the RNA-binding domain of human coronavirus OC43 nucleocapsid protein, *Biochim Biophys Acta*. 2013 June;1834(6):1054-62. PMID:23501675. PMCID: PMC3774783. doi: 10.1016/j.bbapap.2013.03.003.
 142. de Groot RJ, Baker SC, Baric RS, Brown CS, Drosten C, Enjuanes L, Fouchier RA, Galiano M, Gorbalenya AE, Memish ZA, **Perlman S**, Poon LL, Sinjder EJ, Stephens GM, Woo PC, Zaki AM, Zambon M, Ziebuhr J. Middle East respiratory syndrome coronavirus (MERS-CoV): announcement of the Coronavirus Study Group, *J Virol*. 2013 July;87(14):7790-2. PMID:23678167. PMCID: PMC3700179. doi: 10.1128/JVI.01244-13.
 143. Zhao J, Fett C, Pewe L, Zhao J, **Perlman S**. Development of transgenic mice expressing a coronavirus-specific public CD4 T cell receptor, *J Immunol Methods*. 2013 October 31;396(1-2):56-64. PMID:23928495. PMCID: PMC3850057. doi: 10.1016/j.jim.2013.07.011.
 144. DeDiego ML, Nieto-Torres JL, Regla-Nava JA, Jimenez-Guardeño JM, Fernandez-Delgado R, Fett C, Castaño-Rodríguez C, **Perlman S**, Enjuanes L. Inhibition of NF- κ B-mediated inflammation in severe acute respiratory syndrome coronavirus-infected mice increases survival, *J Virol*. 2014 January;88(2):913-24. PMID:24198408. PMCID: PMC3911641. doi: 10.1128/JVI.02576-13.
 145. Lin SY, Liu CL, Chang YM, Zhao J, **Perlman S**, Hou MH. Structural basis for the identification of the N-terminal domain of coronavirus nucleocapsid protein as an antiviral target, *J Med Chem*. 2014 March 27;57(6):2247-57. PMID:24564608. PMCID: PMC3983370. doi: 10.1021/jm500089r.
 146. Zhao J, Li K, Wohlford-Lenane C, Agnihothram SS, Fett C, Zhao J, Gale MJ, Baric RS, Enjuanes L, Gallagher T, McCray PB, **Perlman S**. Rapid generation of a mouse model for Middle East respiratory syndrome, *Proc Natl Acad Sci U S A*. 2014 April 1;111(13):4970-5. PMID:24599590. PMCID: PMC3977243. doi: 10.1073/pnas.1323279111.
 147. Barlan A, Zhao J, Sarkar MK, Li K, McCray PB, **Perlman S**, Gallagher T. Receptor variation and susceptibility to Middle East respiratory syndrome coronavirus infection, *J*

Stanley Perlman - June 2022

- Virol. 2014 May;88(9):4953-61. PMID:24554656. PMCID: PMC3993797. doi: 10.1128/JVI.00161-14.
148. Trujillo JA, Gras S, Twist KA, Croft NP, Channappanavar R, Rossjohn J, Purcell AW, **Perlman S**. Structural and functional correlates of enhanced antiviral immunity generated by heteroclitic CD8 T cell epitopes, *J Immunol*. 2014 June 1;192(11):5245-56. PMID:24795457. PMCID: PMC4052115. doi: 10.4049/jimmunol.1400111.
 149. Hemida M, Perera R, Al Jassim R, Kayali G, Siu L, Wang P, Chu K, **Perlman S**, Ali M, Alnaeem A, Guan Y, Poon L, Saif L, Peiris M. Seroepidemiology of Middle East respiratory syndrome (MERS) coronavirus in Saudi Arabia (1993) and Australia (2014) and characterisation of assay specificity, *Euro Surveill*. 2014 June 12;19(23):pii: 20828. PMID:24957744. PMCID: PMC4674219.
 150. Zhao J, Zhao J, **Perlman S**. Virus-specific regulatory T cells ameliorate encephalitis by repressing effector T cell functions from priming to effector stages, *PLoS Pathog*. 2014 August 7;10(8):e1004279. PMID:25102154. PMCID: PMC4125232. doi: 10.1371/journal.ppat.1004279.
 151. Channappanavar R, Zhao J, **Perlman S**. T cell-mediated immune response to respiratory coronaviruses, *Immunol Res*. 2014 August;59(1-3):118-28. PMID:24845462. PMCID: PMC4125530. doi: 10.1007/s12026-014-8534-z.
 152. Trujillo JA, Croft NP, Dudek NL, Channappanavar R, Theodossis A, Webb AI, Dunstone MA, Illing PT, Butler NS, Fett C, Tschärke DC, Rossjohn J, **Perlman S**, Purcell AW. The cellular redox environment alters antigen presentation, *J Biol Chem*. 2014 October 3;289(40):27979-91. PMID:25135637. PMCID: PMC4183829. doi: 10.1074/jbc.M114.573402.
 153. Channappanavar R, Fett C, Zhao J, Meyerholz DK, **Perlman S**. Virus-specific memory CD8 T cells provide substantial protection from lethal severe acute respiratory syndrome coronavirus infection, *J Virol*. 2014 October;88(19):11034-44. PMID:25056892. PMCID: PMC4178831. doi: 10.1128/JVI.01505-14.
 154. Fett C, Zhao J, **Perlman S**. Measurement of CD8 and CD4 T Cell Responses in Mouse Lungs, *Bio Protoc*. 2014;4(6):e1083. PMID:27390762. PMCID: PMC4932852. doi: 10.21769/bioprotoc.1083.
 155. Fett C, Zhao J, **Perlman S**. Virus Infection and Titration of SARS-CoV in Mouse Lung, *Bio Protoc*. 2014;4(6):e1084. PMID:27390761. PMCID: PMC4932841. doi: 10.21769/bioprotoc.1084.
 156. Zumla A, **Perlman S**, McNabb SJ, Shaikh A, Heymann DL, McCloskey B, Hui DS. Middle East respiratory syndrome in the shadow of Ebola, *Lancet Respir Med*. 2015 February;3(2):100-2. PMID:25592990. doi: 10.1016/S2213-2600(14)70316-9.
 157. Fehr AR, Athmer J, Channappanavar R, Phillips JM, Meyerholz DK, **Perlman S**. The NSP3 macrodomain promotes virulence in mice with coronavirus-induced encephalitis, *J Virol*. 2015 February;89(3):1523-36. PMID:25428866. PMCID: PMC4300739. doi: 10.1128/JVI.02596-14.
 158. Regla-Nava JA, Nieto-Torres JL, Jimenez-Guardeño JM, Fernandez-Delgado R, Fett C, Castaño-Rodríguez C, **Perlman S**, Enjuanes L, DeDiego ML. Severe acute respiratory syndrome coronaviruses with mutations in the E protein are attenuated and promising vaccine candidates, *J Virol*. 2015 April;89(7):3870-87. PMID:25609816. PMCID: PMC4403406. doi: 10.1128/JVI.03566-14.
 159. Mielech AM, Deng X, Chen Y, Kindler E, Wheeler DL, Mesecar AD, Thiel V, **Perlman S**, Baker SC. Murine coronavirus ubiquitin-like domain is important for papain-like protease

Stanley Perlman - June 2022

- stability and viral pathogenesis, *J Virol.* 2015 May;89(9):4907-17. PMID:25694594. PMCID: PMC4403493. doi: 10.1128/JVI.00338-15.
160. Zhao J, Perera RA, Kayali G, Meyerholz D, **Perlman S**, Peiris M. Passive immunotherapy with dromedary immune serum in an experimental animal model for Middle East respiratory syndrome coronavirus infection, *J Virol.* 2015 June;89(11):6117-20. PMID:25787284. PMCID: PMC4442417. doi: 10.1128/JVI.00446-15.
161. **Perlman S**. Research Driven by Curiosity: The Journey from Basic Molecular Biology and Virology to Studies of Human Pathogenic Coronaviruses, *PLoS Pathog.* 2015 July 14;11(7):e1005023. PMID:26172373. PMCID: PMC4501819. doi: 10.1371/journal.ppat.1005023.
162. Petersen E, Hui DS, **Perlman S**, Zumla A. Middle East Respiratory Syndrome - advancing the public health and research agenda on MERS - lessons from the South Korea outbreak, *Int J Infect Dis.* 2015 July;36:54-5. PMID:26072036. doi: 10.1016/j.ijid.2015.06.004.
163. Hui DS, **Perlman S**, Zumla A. Spread of MERS to South Korea and China, *Lancet Respir Med.* 2015 July;3(7):509-10. PMID:26050550. doi: 10.1016/S2213-2600(15)00238-6.
164. Corti D, Zhao J, Pedotti M, Simonelli L, Agnihothram S, Fett C, Fernandez-Rodriguez B, Foglierini M, Agatic G, Vanzetta F, Gopal R, Langrish CJ, Barrett NA, Sallusto F, Baric RS, Varani L, Zambon M, **Perlman S**, Lanzavecchia A. Prophylactic and postexposure efficacy of a potent human monoclonal antibody against MERS coronavirus, *Proc Natl Acad Sci U S A.* 2015 August 18;112(33):10473-8. PMID:26216974. PMCID: PMC4547275. doi: 10.1073/pnas.1510199112.
165. Vijay R, Hua X, Meyerholz DK, Miki Y, Yamamoto K, Gelb M, Murakami M, **Perlman S**. Critical role of phospholipase A2 group IID in age-related susceptibility to severe acute respiratory syndrome-CoV infection, *J Exp Med.* 2015 October 19;212(11):1851-68. PMID:26392224. PMCID: PMC4612096. doi: 10.1084/jem.20150632.
166. Jimenez-Guardeño JM, Regla-Nava JA, Nieto-Torres JL, DeDiego ML, Castaño-Rodriguez C, Fernandez-Delgado R, **Perlman S**, Enjuanes L. Identification of the Mechanisms Causing Reversion to Virulence in an Attenuated SARS-CoV for the Design of a Genetically Stable Vaccine, *PLoS Pathog.* 2015 October 29;11(10):e1005215. PMID:26513244. PMCID: PMC4626112. doi: 10.1371/journal.ppat.1005215.
167. Li Y, Wan Y, Liu P, Zhao J, Lu G, Qi J, Wang Q, Lu X, Wu Y, Liu W, Zhang B, Yuen KY, **Perlman S**, Gao GF, Yan J. A humanized neutralizing antibody against MERS-CoV targeting the receptor-binding domain of the spike protein, *Cell Res.* 2015 November;25(11):1237-49. PMID:26391698. PMCID: PMC4650419. doi: 10.1038/cr.2015.113.
168. Channappanavar R, Lu L, Xia S, Du L, Meyerholz DK, **Perlman S**, Jiang S. Protective Effect of Intranasal Regimens Containing Peptidic Middle East Respiratory Syndrome Coronavirus Fusion Inhibitor Against MERS-CoV Infection, *J Infect Dis.* 2015 December 15;212(12):1894-903. PMID:26164863. PMCID: PMC4655857. doi: 10.1093/infdis/jiv325.
169. Fehr AR, **Perlman S**. Coronaviruses: an overview of their replication and pathogenesis, *Methods Mol Biol.* 2015;1282:1-23. PMID:25720466. PMCID: PMC4369385. doi: 10.1007/978-1-4939-2438-7_1.
170. Channappanavar R, Fehr AR, Vijay R, Mack M, Zhao J, Meyerholz DK, **Perlman S**. Dysregulated Type I Interferon and Inflammatory Monocyte-Macrophage Responses Cause Lethal Pneumonia in SARS-CoV-Infected Mice, *Cell Host Microbe.* 2016

Stanley Perlman - June 2022

February 10;19(2):181-93. PMID:26867177. PMCID: PMC4752723. doi: 10.1016/j.chom.2016.01.007.

171. Luke T, Wu H, Zhao J, Channappanavar R, Coleman CM, Jiao JA, Matsushita H, Liu Y, Postnikova EN, Ork BL, Glenn G, Flyer D, Defang G, Raviprakash K, Kochel T, Wang J, Nie W, Smith G, Hensley LE, Olinger GG, Kuhn JH, Holbrook MR, Johnson RF, **Perlman S**, Sullivan E, Frieman MB. Human polyclonal immunoglobulin G from transchromosomal bovines inhibits MERS-CoV in vivo, *Sci Transl Med*. 2016 February 17;8(326):326ra21. PMID:26888429. doi: 10.1126/scitranslmed.aaf1061.
172. Vijay R, **Perlman S**. Middle East respiratory syndrome and severe acute respiratory syndrome, *Curr Opin Virol*. 2016 February;16:70-6. PMID:26855039. PMCID: PMC4821769. doi: 10.1016/j.coviro.2016.01.011.
173. Li K, Wohlford-Lenane C, **Perlman S**, Zhao J, Jewell AK, Reznikov LR, Gibson-Corley KN, Meyerholz DK, McCray Jr PB. Middle East Respiratory Syndrome Coronavirus Causes Multiple Organ Damage and Lethal Disease in Mice Transgenic for Human Dipeptidyl Peptidase 4, *J Infect Dis*. 2016 March 1;213(5):7122-22. PMID:26486634. PMCID: PMC4747621. doi: 10.1093/infdis/jiv499.
174. Zhang N, Channappanavar R, Ma C, Wang L, Tang J, Garron T, Tao X, Tasneem S, Lu L, Tseng CT, Zhou Y, **Perlman S**, Jiang S, Du L. Identification of an ideal adjuvant for receptor-binding domain-based subunit vaccines against Middle East respiratory syndrome coronavirus, *Cell Mol Immunology*. 2016 March;13(2):180-90. PMID:25640653. PMCID: PMC4786625. doi: 10.1038/cmi.2015.03.
175. Bedell K, Buchaklian AH, **Perlman S**. Efficacy of an Automated Multiple Emitter Whole-Room Ultraviolet-C Disinfection System Against Coronaviruses MHV and MERS-CoV, *Infect Control Hosp Epidemiol*. 2016 May;37(5):598-9. PMID:26818469. PMCID: PMC5369231. doi: 10.1017/ice.2015.348.
176. Zhao J, Zhao J, Mangalam AK, Channappanavar R, Fett C, Meyerholz DK, Agnihothram S, Baric RS, David CS, **Perlman S**. Airway Memory CD4(+) T Cells Mediate Protective Immunity against Emerging Respiratory Coronaviruses, *Immunity*. 2016 June 21;44(6):1379-91. PMID:27287409. PMCID: PMC4917442. doi: 10.1016/j.immuni.2016.05.006.
177. Alshukairi AN, Khalid I, Ahmed WA, Dada AM, Bayumi DT, Malic LS, Althawadi S, Ignacio K, Alsalmi HS, Al-Abdely HM, Wali GY, Qushmaq IA, Alraddadi BM, **Perlman S**. Antibody Response and Disease Severity in Healthcare Worker MERS Survivors, *Emerg Infect Dis*. 2016 June;22(6). PMID:27192543. PMCID: PMC4880093. doi: 10.3201/eid2206.160010.
178. **Perlman S**, Vijay R. Middle East respiratory syndrome vaccines, *Int J Infect Dis*. 2016 June;47:23-8. PMID:27062985. PMCID: PMC4969153. doi: 10.1016/j.ijid.2016.04.008.
179. Zhao J, Vijay R, Zhao J, Gale Jr M, Diamond MS, **Perlman S**. MAVS Expressed by Hematopoietic Cells Is Critical for Control of West Nile Virus Infection and Pathogenesis, *J Virol*. 2016 July 27;90(16):7098-108. PMID:27226371. PMCID: PMC4984631. doi: 10.1128/JVI.00707-16.
180. Park JE, Li K, Barlan A, Fehr AR, **Perlman S**, McCray, Jr PB, Gallagher T. Proteolytic processing of Middle East respiratory syndrome coronavirus spikes expands virus tropism., *Proc Natl Acad Sci U S A*. 2016 October 25;113(43):12262-12267. PMID:27791014. PMCID: PMC5086990. doi: 10.1073/pnas.1608147113.
181. Du L, Tai W, Yang Y, Zhao G, Zhu Q, Sun S, Liu C, Tao X, Tseng CK, **Perlman S**, Jiang S, Zhou Y, Li F. Introduction of neutralizing immunogenicity index to the rational design

Stanley Perlman - June 2022

- of MERS coronavirus subunit vaccines, *Nat Commun.* 2016 November 22;7:13473. PMID:27874853. PMCID: PMC5121417. doi: 10.1038/ncomms13473.
182. Fehr AR, Channappanavar R, Jankevicius G, Fett C, Zhao J, Athmer J, Meyerholz DK, Ahel I, **Perlman S**. The Conserved Coronavirus Macrodomein Promotes Virulence and Suppresses the Innate Immune Response during Severe Acute Respiratory Syndrome Coronavirus Infection, *mBio.* 2016 December 13;7(6):pii: e01721-16. PMID:27965448. PMCID: PMC5156301. doi: 10.1128/mBio.01721-16.
 183. Tai W, Wang Y, Fett CA, Zhao G, Li F, **Perlman S**, Jiang S, Zhou Y, Du L. Recombinant Receptor-Binding Domains of Multiple Middle East Respiratory Syndrome Coronaviruses (MERS-CoVs) Induce Cross-Neutralizing Antibodies against Divergent Human and Camel MERS-CoVs and Antibody Escape Mutants, *J Virol.* 2016 December 16;91(1):pii: e01651-16. PMID:27795425. PMCID: PMC5165220. doi: 10.1128/JVI.01651-16.
 184. Cui J, Zhao Y, Wang H, Qiu B, Cao Z, Li Q, Zhang Y, Yan F, Jin H, Wang T, Sun W, Feng N, Gao Y, Sun J, Wang Y, **Perlman S**, Zhao J, Yang S, Xia X. Equine Immunoglobulin and Equine Neutralizing F(ab')₂ Protect Mice from West Nile Virus Infection, *Viruses.* 2016 December 18;8(12):pii: E332. PMID:27999340. PMCID: PMC5192393. doi: 10.3390/v8120332.
 185. **Perlman S**, Zhao J. Roles of regulatory T cells and IL-10 in virus-induced demyelination, *J Neuroimmunol.* 2017 January 4;308:6-11. PMID:28065579. PMCID: PMC5474348. doi: 10.1016/j.jneuroim.2017.01.001.
 186. Wang Y, Sun J, Channappanavar R, Zhao J, **Perlman S**, Zhao J. Simultaneous Intranasal/Intravascular Antibody Labeling of CD4+ T Cells in Mouse Lungs, *Bio Protoc.* 2017 January 5;7(1):e2099. PMID:28516121. PMCID: PMC5431592. doi: 10.21769/BioProtoc.2099.
 187. Fehr AR, Channappanavar R, **Perlman S**. Middle East Respiratory Syndrome: Emergence of a Pathogenic Human Coronavirus, *Annu Rev Med.* 2017 January 14;68:387-399. PMID:27576010. PMCID: PMC5353356. doi: 10.1146/annurev-med-051215-031152.
 188. de Wilde AH, Falzarano D, Zevenhoven-Dobbe JC, Beugeling C, Fett C, Martellaro C, Posthuma CC, Feldmann H, **Perlman S**, Snijder EJ. Alisporivir inhibits MERS- and SARS-coronavirus replication in cell culture, but not SARS-coronavirus infection in a mouse model, *Virus Res.* 2017 January 15;228:7-13. PMID:27840112. doi: 10.1016/j.virusres.2016.11.011.
 189. Zhao Y, Wang C, Qiu B, Li C, Wang H, Jin H, Gai W, Zheng X, Wang T, Sun W, Yan F, Gao Y, Wang Q, Yan J, Chen L, **Perlman S**, Zhong N, Zhao J, Yang S, Xia X. Passive immunotherapy for Middle East Respiratory Syndrome coronavirus infection with equine immunoglobulin or immunoglobulin fragments in a mouse model., *Antiviral Res.* 2017 January;137:125-130. PMID:27890674. doi: 10.1016/j.antiviral.2016.11.016.
 190. Athmer J, Fehr AR, Grunewald M, Smith EC, Denison MR, **Perlman S**. In Situ Tagged nsp15 Reveals Interactions with Coronavirus Replication/Transcription Complex-Associated Proteins, *MBio.* 2017 January 31;8(1):e02320-16. PMID:28143984. PMCID: PMC5285509. doi: 10.1128/mBio.02320-16.
 191. Chi H, Zheng X, Wang X, Wang C, Wang H, Gai W, **Perlman S**, Yang S, Zhao J, Xia X. DNA vaccine encoding Middle East respiratory syndrome coronavirus S1 protein induces protective immune responses in mice., *Vaccine.* 2017 April 11;35(16):2069-75. PMID:28314561. PMCID: PMC5411280. doi: 10.1016/j.vaccine.2017.02.063.
 192. Li K, Wohlford-Lenane CL, Channappanavar R, Park JE, Earnest JT, Bair TB, Bates AM, Brogden KA, Flaherty HA, Gallagher T, Meyerholz DK, **Perlman S**, McCray PB. Mouse-

Stanley Perlman - June 2022

- adapted MERS coronavirus causes lethal lung disease in human DPP4 knockin mice, *Proc Natl Acad Sci U S A*. 2017 April 11;114(15):E3119-E3128. PMID:28348219. PMCID: PMC5393213. doi: 10.1073/pnas.1619109114.
193. Channappanavar R, Fett C, Mack M, Ten Eyck P, Meyerholz DK, **Perlman S**. Sex-Based Differences in Susceptibility to Severe Acute Respiratory Syndrome Coronavirus Infection, *J Immunol*. 2017 May 15;198(10):4046-4053. PMID:28373583. PMCID: PMC5450662. doi: 10.4049/jimmunol.1601896.
 194. Vijay R, Fehr AR, Janowski AM, Athmer J, Wheeler DL, Grunewald M, Sompallae R, Kurup SP, Meyerholz DK, Sutterwala FS, Narumiya S, **Perlman S**. Virus-induced inflammasome activation is suppressed by prostaglandin D2/DP1 signaling, *Proc Natl Acad Sci U S A*. 2017 July 3;114(27):E5444-E5453. PMID:28630327. PMCID: PMC5502630. doi: 10.1073/pnas.1704099114.
 195. Channappanavar R, **Perlman S**. Pathogenic human coronavirus infections: causes and consequences of cytokine storm and immunopathology, *Semin Immunopathol*. 2017 July;39(5):529-539. PMID:28466096. doi: 10.1007/s00281-017-0629-x.
 196. Earnest JT, Hantak MP, Li K, McCray PB, **Perlman S**, Gallagher T. The tetraspanin CD9 facilitates MERS-coronavirus entry by scaffolding host cell receptors and proteases, *PLoS Pathog*. 2017 July 31;13(7):e1006546. PMID:28759649. PMCID: PMC5552337. doi: 10.1371/journal.ppat.1006546.
 197. Zhao J, Alshukairi AN, Baharoon SA, Ahmed WA, Bokhari AA, Nehdi AM, Layqah LA, Alghamdi MG, Al Gethamy MM, Dada AM, Khalid I, Boujelal M, Al Johani SM, Vogel L, Subbarao K, Mangalam A, Wu C, Ten Eyck P, **Perlman S**, Zhao J. Recovery from the Middle East respiratory syndrome is associated with antibody and T-cell responses, *Sci Immunol*. 2017 August 4;2(14):eaan5393. PMID:28778905. PMCID: PMC5576145. doi: 10.1126/sciimmunol.aan5393.
 198. Wheeler DL, Athmer J, Meyerholz DK, **Perlman S**. Murine Olfactory Bulb Interneurons Survive Infection with a Neurotropic Coronavirus, *J Virol*. 2017 October 27;91(22):e01099-17. PMID:28835503. PMCID: PMC5660484. doi: 10.1128/JVI.01099-17.
 199. Grunewald ME, Fehr AR, Athmer J, **Perlman S**. The coronavirus nucleocapsid protein is ADP-ribosylated, *Virology*. 2017 November 30;517:62-68. PMID:29199039. PMCID: PMC5871557. doi: 10.1016/j.virol.2017.11.020.
 200. Canton J, Fehr AR, Fernandez-Delgado R, Gutierrez-Alvarez FJ, Sanchez-Aparicio MT, García-Sastre A, **Perlman S**, Enjuanes L, Sola I. MERS-CoV 4b protein interferes with the NF- κ B-dependent innate immune response during infection, *PLoS Pathog*. 2018 January 25;14(1):e1006838. PMID:29370303. PMCID: PMC5800688. doi: 10.1371/journal.ppat.1006838.
 201. Wheeler DL, Sariol A, Meyerholz DK, **Perlman S**. Microglia are required for protection against lethal coronavirus encephalitis in mice, *J Clin Invest*. 2018 March 1;128(3):931-943. PMID:29376888. PMCID: PMC5824854. doi: 10.1172/JCI97229.
 202. Chu DK, Hui KP, Perera RA, Miguel E, Niemeyer D, Zhao J, Channappanavar R, Dudas G, Oladipo JO, Traoré A, Fassi-Fihri O, Ali A, Demissié GF, Muth D, Chan MC, Nicholls JM, Meyerholz DK, Kuranga SA, Mamo G, Zhou Z, So RT, Hemida MG, Webby RJ, Roger F, Rambaut A, Poon LL, **Perlman S**, Drosten C, Chevalier V, Peiris M. MERS coronaviruses from camels in Africa exhibit region-dependent genetic diversity, *Proc Natl Acad Sci U S A*. 2018 March 20;115(12):3144-3149. PMID:29507189. PMCID: PMC5866576. doi: 10.1073/pnas.1718769115.

Stanley Perlman - June 2022

203. Galasiti Kankanamalage AC, Kim Y, Damalanka VC, Rathnayake AD, Fehr AR, Mehzabeen N, Battaile KP, Lovell S, Lushington GH, **Perlman S**, Chang KO, Groutas WC. Structure-guided design of potent and permeable inhibitors of MERS coronavirus 3CL protease that utilize a piperidine moiety as a novel design element, *Eur J Med Chem*. 2018 April 25;150:334-346. PMID:29544147. PMCID: PMC5891363. doi: 10.1016/j.ejmech.2018.03.004.
204. Athmer J, Fehr AR, Grunewald ME, Qu W, Wheeler DL, Graepel KW, Channappanavar R, Sekine A, Aldabeeb DS, Gale, Jr M, Denison MR, **Perlman S**. Selective Packaging in Murine Coronavirus Promotes Virulence by Limiting Type I Interferon Responses, *MBio*. 2018 May 1;9(3):e00272-18. PMID:29717007. PMCID: PMC5930304. doi: 10.1128/mBio.00272-18.
205. Castaño-Rodríguez C, Honrubia JM, Gutiérrez-Álvarez J, DeDiego ML, Nieto-Torres JL, Jimenez-Guardeño JM, Regla-Nava JA, Fernandez-Delgado R, Verdía-Báguena C, Queralt-Martín M, Kochan G, **Perlman S**, Aguilera VM, Sola I, Enjuanes L. Role of Severe Acute Respiratory Syndrome Coronavirus Viroporins E, 3a, and 8a in Replication and Pathogenesis, *MBio*. 2018 May 22;9(3):pii: e02325-17. PMID:29789363. PMCID: PMC5964350. doi: 10.1128/mBio.02325-17.
206. Hua X, Vijay R, Channappanavar R, Athmer J, Meyerholz DK, Pagedar N, Tilley S, **Perlman S**. Nasal priming by a murine coronavirus provides protective immunity against lethal heterologous virus pneumonia, *JCI Insight*. 2018 June 7;3(11):pii: 99025. PMID:29875310. doi: 10.1172/jci.insight.99025.
207. Alshukairi AN, Zheng J, Zhao J, Nehdi A, Baharoon SA, Layqah L, Bokhari A, Al Johani SM, Samman N, Boudjelal M, Ten Eyck P, Al-Mozaini MA, Zhao J, **Perlman S**, Alagaili AN. High Prevalence of MERS-CoV Infection in Camel Workers in Saudi Arabia, *MBio*. 2018 October 30;9(5):e01985-18. PMID:30377284. PMCID: PMC6212820. doi: 10.1128/mBio.01985-18.
208. **Perlman S**, Gallagher T. Not your usual tRNA synthetase: hWARS serves as an enterovirus entry factor, *J Clin Invest*. 2018 November 1;128(11):4767-4769. PMID:30320601. PMCID: PMC6205376. doi: 10.1172/JCI124582.
209. Yuan S, Chu H, Chan JF, Ye ZW, Wen L, Yan B, Lai PM, Tee KM, Huang J, Chen D, Li C, Zhao X, Yang D, Chiu MC, Yip C, Poon VK, Chan CC, Sze KH, Zhou J, Chan IH, Kok KH, To KK, Kao RY, Lau JY, Jin DY, **Perlman S**, Yuen KY. SREBP-dependent lipidomic reprogramming as a broad-spectrum antiviral target, *Nat Commun*. 2019 January 10;10(1):120. PMID:30631056. PMCID: PMC6328544. doi: 10.1038/s41467-018-08015-x.
210. Liu L, Wei Q, Lin Q, Fang J, Wang H, Kwok H, Tang H, Nishiura K, Peng J, Tan Z, Wu T, Cheung KW, Chan KH, Alvarez X, Qin C, Lackner A, **Perlman S**, Yuen KY, Chen Z. Anti-spike IgG causes severe acute lung injury by skewing macrophage responses during acute SARS-CoV infection, *JCI Insight*. 2019 February 21;4(4):123158. PMID:30830861. PMCID: PMC6478436. doi: 10.1172/jci.insight.123158.
211. Grunewald ME, Chen Y, Kuny C, Maejima T, Lease R, Ferraris D, Aikawa M, Sullivan CS, Perlman S, Fehr AR. The coronavirus macrodomain is required to prevent PARP-mediated inhibition of virus replication and enhancement of IFN expression, *PLoS Pathog*. 2019 May 16;15(5):e1007756. PMID:31095648. PMCID: PMC6521996. doi: 10.1371/journal.ppat.1007756.
212. **Perlman S**, Azhar EI, Memish ZA, Hui DS, Zumla A. Confronting the persisting threat of the Middle East respiratory syndrome to global health security, *Lancet Infect Dis*. 2019 July 3:S1473-3099(19)30347-0. PMID:31279728. doi: 10.1016/S1473-3099(19)30347-0.

Stanley Perlman - June 2022

213. Channappanavar R, Fehr AR, Zheng J, Wohlford-Lenane C, Abrahante JE, Mack M, Sompallae R, McCray, Jr PB, Meyerholz DK, **Perlman S**. IFN-I response timing relative to virus replication determines MERS coronavirus infection outcomes, *J Clin Invest*. 2019 July 29;130:3625-3639. PMID:31355779. PMCID: PMC6715373. doi: 10.1172/JCI126363.
214. Zumla A, Memish ZA, Hui DS, **Perlman S**. Vaccine against Middle East respiratory syndrome coronavirus, *Lancet Infect Dis*. 2019 October 1;19(10):1054-1055. PMID:31559955. doi: 10.1016/S1473-3099(19)30477-3.
215. Zheng J, Hassan S, Alagaili AN, Alshukairi AN, Amor N, Mukhtar N, Nazeer IM, Tahir Z, Akhter N, **Perlman S**, Yaqub T. Middle East Respiratory Syndrome Coronavirus Seropositivity in Camel Handlers and Their Families, Pakistan, *Emerg Infect Dis*. 2019 December;25(12). PMID:31742530. PMCID: PMC6874235. doi: 10.3201/eid2512.191169.
216. Grunewald ME, Shaban MG, Mackin SR, Fehr AR, **Perlman S**. Murine Coronavirus Infection Activates the Aryl Hydrocarbon Receptor in an Indoleamine 2,3-Dioxygenase-Independent Manner, Contributing to Cytokine Modulation and Proviral TCDD-Inducible-PARP Expression, *J Virol*. 2020 January 17;94(3):e01743-19. PMID:31694960. PMCID: PMC7000979. doi: 10.1128/JVI.01743-19.
217. Qing E, Hantak M, **Perlman S**, Gallagher T. Distinct Roles for Sialoside and Protein Receptors in Coronavirus Infection, *mBio*. 2020 February 11;11(1):e02764-19. PMID:32047128. PMCID: PMC7018658. doi: 10.1128/mBio.02764-19.
218. Gorbalenya AE, Baker SC, Baric RS, de Groot RJ, Drosten C, Gulyaeva AA, Haagmans BL, Lauber C, Leontovich AM, Neuman BW, Penzar D, **Perlman S**, Poon LM, Samborskiy DV, Sidorov IA, Sola I, Ziebuhr J. The species Severe acute respiratory syndrome-related coronavirus: classifying 2019-nCoV and naming it SARS-CoV-2, *Nat Microbiol*. 2020 March 2:Epub ahead of print. PMID:32123347. doi: 10.1038/s41564-020-0695-z.
Coronaviridae Study Group of the International Committee on Taxonomy of Viruses: Alexander E. Gorbalenya, Susan C. Baker, Ralph S. Baric, Raoul J. de Groot, Christian Drosten, Anastasia A. Gulyaeva, Bart L. Haagmans, Chris Lauber, Andrey M. Leontovich, Benjamin W. Neuman, Dmitry Penzar, Stanley Perlman, Leo L. M. Poon, Dmitry V. Samborskiy, Igor A. Sidorov, Isabel Sola & John Ziebuhr
219. Memish ZA, **Perlman S**, Van Kerkhove MD, Zumla A. Middle East respiratory syndrome, *Lancet*. 2020 March 4:Epub ahead of print. PMID:32145185. doi: 10.1016/S0140-6736(19)33221-0.
220. Poh C, Zheng J, Channappanavar R, Chang ZW, Nguyen T HO, Rénia L, Kedzierska K, **Perlman S**, Poon L LM. Multiplex screening assay for identifying cytotoxic CD8+ T cell epitopes, *Front Immunol*. 2020 March 11;11:400. PMID:32218786. PMCID: PMC7078160. doi: 10.3389/fimmu.2020.00400.
221. Li K, Li Z, Wohlford-Lenane C, Meyerholz DK, Channappanavar R, An D, **Perlman S**, McCray, Jr PB, He B. Single-Dose, Intranasal Immunization with Recombinant Parainfluenza Virus 5 Expressing Middle East Respiratory Syndrome Coronavirus (MERS-CoV) Spike Protein Protects Mice from Fatal MERS-CoV Infection, *mBio*. 2020 April 7;11(2):e00554-20. PMID:32265331. PMCID: PMC7157776. doi: 10.1128/mBio.00554-20.
222. Lambert PH, Ambrosino DM, Andersen SR, Baric RS, Black SB, Chen RT, Dekker CL, Didierlaurent AM, Graham BS, Martin SD, Molrine DC, **Perlman S**, Picard-Fraser PA, Pollard AJ, Qin C, Subbarao K, Cramer JP. Consensus summary report for CEPI/BC March 12-13, 2020 meeting: Assessment of risk of disease enhancement with COVID-

Stanley Perlman - June 2022

- 19 vaccines, *Vaccine*. 2020 June 26;38(31):4783-4791. PMID:32507409. PMCID: PMC7247514. doi: 10.1016/j.vaccine.2020.05.064.
223. Zheng J, Sariol A, Meyerholz D, Zhang Q, Abrahante Lloréns JE, Narumiya S, **Perlman S**. Prostaglandin D2 signaling in dendritic cells is critical for the development of EAE, *J Autoimmun*. 2020 July 2:102508. PMID:32624353. PMCID: PMC7332282. doi: 10.1016/j.jaut.2020.102508.
224. Pan R, Zhang Q, Anthony SM, Zhou Y, Zou X, Cassell M, **Perlman S**. Oligodendrocytes that survive acute coronavirus infection induce prolonged inflammatory responses in the CNS, *Proc Natl Acad Sci U S A*. 2020 July 7;117(27):15902-15910. PMID:32571951. PMCID: PMC7355048. doi: 10.1073/pnas.2003432117.
225. Hassan AO, Case JB, Winkler ES, Thackray LB, Kafai NM, Bailey AL, McCune BT, Fox JM, Chen RE, Alsoussi WB, Turner JS, Schmitz AJ, Lei T, Shrihari S, Keeler SP, Fremont DH, Greco S, McCray, Jr PB, **Perlman S**, Holtzman MJ, Ellebedy AH, Diamond MS. A SARS-CoV-2 Infection Model in Mice Demonstrates Protection by Neutralizing Antibodies, *Cell*. 2020 August 6;182(3):744-753.e4. PMID:32553273. PMCID: PMC7284254. doi: 10.1016/j.cell.2020.06.011.
226. Sun J, Zhuang Z, Zheng J, Li K, Wong RL-Y, Liu D, Huang J, He J, Zhu A, Zhao J, Li X, Xi Y, Chen R, Alshukairi AN, Chen Z, Zhang Z, Chen C, Huang X, Li F, Lai X, Chen D, Wen L, Zhuo J, Zhang Y, Wang Y, Huang S, Dai J, Shi Y, Zheng K, Leidinger MR, Chen J, Li Y, Zhong N, Meyerholz DK, McCray, Jr PB, **Perlman S**, Zhao J. Generation of a Broadly Useful Model for COVID-19 Pathogenesis, Vaccination, and Treatment, *Cell*. 2020 August 6;182(3):734-743.e5. PMID:32643603. PMCID: PMC7284240. doi: 10.1016/j.cell.2020.06.010.
227. Welch JL, Xiang J, Mackin SR, **Perlman S**, Thorne P, O'Shaughnessy P, Strzelecki B, Aubin P, Ortiz-Hernandez M, Stapleton JT. Inactivation of Severe Acute Respiratory Coronavirus Virus 2 (SARS-CoV-2) and Diverse RNA and DNA Viruses on Three-Dimensionally Printed Surgical Mask Materials, *Infect Control Hosp Epidemiol*. 2020 August 12:1-8. PMID:32783787. PMCID: PMC7463154. doi: 10.1017/ice.2020.417.
228. Rathnayake AD, Zheng J, Kim Y, Perera KD, Mackin S, Meyerholz DK, Kashipathy MM, Battaile KP, Lovell S, **Perlman S**, Groutas WC, Chang KO. 3C-like protease inhibitors block coronavirus replication in vitro and improve survival in MERS-CoV-infected mice, *Sci Transl Med*. 2020 August 19;12(557):eabc5332. PMID:32747425. doi: 10.1126/scitranslmed.abc5332.
229. Muñoz-Fontela C, Dowling WE, Funnell S GP, Gsell PS, Balta XR, Albrecht RA, Andersen H, Baric RS, Carroll MW, Cavaleri M, Qin C, Crozier I, Dallmeier K, de Waal L, de Wit E, Delang L, Dohm E, Duprex WP, Falzarano D, Finch CL, Frieman MB, Graham BS, Gralinski L, Guilfoyle K, Haagmans BL, Hamilton GA, Hartman AL, Herfst S, Kaptein SJ F, Klimstra W, Knezevic I, Krause PR, Kuhn JH, Le Grand R, Lewis M, Liu WC, Maisonnasse P, McElroy AK, Munster V, Oreshkova N, Rasmussen AL, Rocha-Pereira J, Rockx B, Rodríguez E, Rogers T, Salguero FJ, Schotsaert M, Stittelaar KJ, Jan Thibaut H, Tseng CT, Vergara-Alert J, Beer M, Brasel T, Chan JF W, García-Sastre A, Neyts J, **Perlman S**, Reed DS, Richt JA, Roy CJ, Segalés J, Vasan SS, Henao-Restrepo AM, Barouch DH. Animal models for COVID-19, *Nature*. 2020 September 23:Online ahead of print. PMID:32967005. doi: 10.1038/s41586-020-2787-6.
230. Sariol A, Mackin S, Allred MG, Ma C, Zhou Y, Zhang Q, Zou X, Abrahante JE, Meyerholz DK, **Perlman S**. Microglia depletion exacerbates demyelination and impairs remyelination in a neurotropic coronavirus infection, *Proc Natl Acad Sci U S A*. 2020 September 29;117(39):24464-24474. PMID:32929007. doi: 10.1073/pnas.2007814117.

Stanley Perlman - June 2022

231. Wang Y, Zhang L, Sang L, Ye F, Ruan S, Zhong B, Song T, Alshukairi AN, Chen R, Zhang Z, Gan M, Zhu A, Huang Y, Luo L, Mok CK P, Al Gethamy MM, Tan H, Li Z, Huang X, Li F, Sun J, Zhang Y, Wen L, Li Y, Chen Z, Zhuang Z, Zhuo J, Chen C, Kuang L, Wang J, Lv H, Jiang Y, Li M, Lin Y, Deng Y, Tang L, Liang J, Huang J, **Perlman S**, Zhong N, Zhao J, Malik Peiris JS, Li Y, Zhao J. Kinetics of viral load and antibody response in relation to COVID-19 severity, *J Clin Invest*. 2020 October 1;130(10):5235-5244. PMID:32634129. PMCID: PMC7524490. doi: 10.1172/JCI138759.
232. **Perlman S**, Zumla A. MERS-CoV in Africa-an enigma with relevance to COVID-19, *Lancet Infect Dis*. 2020 October 6:S1473-3099(20)30578-8. PMID:33035475. PMCID: PMC7538079. doi: 10.1016/S1473-3099(20)30578-8.
233. Ghosh S, Dellibovi-Ragheb TA, Kerviel A, Pak E, Qiu Q, Fisher M, Takvorian PM, Bleck C, Hsu VW, Fehr AR, **Perlman S**, Achar SR, Straus MR, Whittaker GR, de Haan CA M, Kehrl J, Altan-Bonnet G, Altan-Bonnet N. β -Coronaviruses Use Lysosomes for Egress Instead of the Biosynthetic Secretory Pathway, *Cell*. 2020 October 27:S0092-8674(20)31446-X. PMID:33157038. PMCID: PMC7590812. doi: 10.1016/j.cell.2020.10.039.
234. Gutierrez-Alvarez J, Wang L, Fernandez-Delgado R, Li K, McCray, Jr PB, **Perlman S**, Sola I, Zuñiga S, Enjuanes L. Middle East Respiratory Syndrome Coronavirus Gene 5 Modulates Pathogenesis in Mice, *J Virol*. 2020 November 3:JVI.01172-20. PMID:33144319. doi: 10.1128/JVI.01172-20.
235. Wong LR, Li K, Sun J, Zhuang Z, Zhao J, McCray, Jr PB, **Perlman S**. Sensitization of Non-permissive Laboratory Mice to SARS-CoV-2 with a Replication-Deficient Adenovirus Expressing Human ACE2, *STAR Protoc*. 2020 November 9;1(3):100169. PMID:33377063. PMCID: PMC7757354. doi: 10.1016/j.xpro.2020.100169.
236. Channappanavar R, **Perlman S**. Age-related susceptibility to coronavirus infections: role of impaired and dysregulated host immunity, *J Clin Invest*. 2020 November 16:144115. PMID:33085654. doi: 10.1172/JCI144115.
237. Meyerholz DK, **Perlman S**. Does common cold coronavirus infection protect against severe SARS-CoV2 disease?, *J Clin Invest*. 2020 November 20:144807. PMID:33216734. doi: 10.1172/JCI144807.
238. Zheng J, Wang Y, Li K, Meyerholz DK, Allamargot C, **Perlman S**. SARS-CoV-2-induced immune activation and death of monocyte-derived human macrophages and dendritic cells, *J Infect Dis*. 2020 December 5. PMID:33277988. doi: 10.1093/infdis/jiaa753.
239. Heer CD, Sanderson DJ, Voth LS, Alhammad YM O, Schmidt MS, Trammell SA J, **Perlman S**, Cohen MS, Fehr AR, Brenner C. Coronavirus infection and PARP expression dysregulate the NAD Metabolome: an actionable component of innate immunity, *J Biol Chem*. 2020 December 25;295(52):17986-17996. PMID:33051211. doi: 10.1074/jbc.RA120.015138.
240. Channappanavar R, **Perlman S**. Evaluation of Activation and Inflammatory Activity of Myeloid Cells During Pathogenic Human Coronavirus Infection, *Methods Mol Biol*. 2020;2099:195-204. PMID:31883097. doi: 10.1007/978-1-0716-0211-9_15.
241. Zheng J, Wong LR, Li K, Verma AK, Ortiz ME, Wohlford-Lenane C, Leidinger MR, Knudson CM, Meyerholz DK, McCray, Jr PB, **Perlman S**. COVID-19 treatments and pathogenesis including anosmia in K18-hACE2 mice, *Nature*. 2021 January;589(7843):603-607. PMID:33166988. PMCID: PMC7855185. doi: 10.1038/s41586-020-2943-z.
242. Kobayashi T, Ortiz ME, Imborek KL, Alsuhaibani M, Holley SA, Trannel A, Marra AR, Etienne W, Jenn KE, Abosi OJ, Meacham H, Sheeler LL, Dains A, Kukla ME, McCray, Jr

Stanley Perlman - June 2022

- PB, **Perlman S**, Ford B, Diekema DJ, Wellington M, Salinas JL, Pezzulo AA. Suspected COVID-19 Reinfections at a Tertiary Care Center, Iowa, 2020, *Open Forum Infect Dis*. 2021 April 14;8(7):ofab188. PMID:34322564. PMCID: PMC8083313. doi: 10.1093/ofid/ofab188.
243. Alshukairi AN, Zhao J, Al-Mozaini MA, Wang Y, Dada A, Baharoon SA, Alfaraj S, Ahmed WA, Enani MA, Elzein FE, Eltayeb N, Layqah L, El-Saed A, Bahauden HA, Haseeb A, El-Kafrawy SA, Hassan AM, Siddiq NA, Alsharif I, Qushmaq I, Azhar EI, **Perlman S**, Memish ZA. Longevity of Middle East Respiratory Syndrome Coronavirus Antibody Responses in Humans, Saudi Arabia, *Emerg Infect Dis*. 2021 May 1;27(5):1472-1476. PMID:33900908. PMCID: PMC8084512. doi: 10.3201/eid2705.204056.
244. Munoz FM, Cramer JP, Dekker CL, Dudley MZ, Graham BS, Gurwith M, Law B, **Perlman S**, Polack FP, Spergel JM, Van Braeckel E, Ward BJ, Didierlaurent AM, Lambert PH, Brighton Collaboration Vaccine-associated Enhanced Disease Working Group. Vaccine-associated enhanced disease: Case definition and guidelines for data collection, analysis, and presentation of immunization safety data, *Vaccine*. 2021 May 21;39(22):3053-3066. PMID:33637387. PMCID: PMC7901381. doi: 10.1016/j.vaccine.2021.01.055.
245. Zheng J, Wen L, Yen HL, Liu M, Liu Y, Teng O, Wu WF, Ni K, Lam KT, Huang C, Yang J, Lau YL, **Perlman S**, Peiris M, Tu W. Phenotypic and Functional Characteristics of a Novel Influenza Virus Hemagglutinin-Specific Memory NK Cell, *J Virol*. 2021 May 24;95(12):e00165-21. PMID:33827945. PMCID: PMC8316001. doi: 10.1128/JVI.00165-21.
246. Zheng J, Meyerholz D, Wong LK, Gelb M, Murakami M, **Perlman S**. Coronavirus-specific antibody production in middle-aged mice requires phospholipase A₂G₂D, *J Clin Invest*. 2021 June 1;131(11):e147201. PMID:34060490. PMCID: PMC8266207. doi: 10.1172/JCI147201.
247. Wong LR, Zheng J, Sariol A, Lowery S, Meyerholz DK, Gallagher T, **Perlman S**. Middle East respiratory syndrome coronavirus Spike protein variants exhibit geographic differences in virulence, *Proc Natl Acad Sci U S A*. 2021 June 15;118(24):e2102983118. PMID:34099556. PMCID: PMC8214665. doi: 10.1073/pnas.2102983118.
248. Chu H, Shuai H, Hou Y, Zhang X, Wen L, Huang X, Hu B, Yang D, Wang Y, Yoon C, Wong BH, Li C, Zhao X, Poon VK, Cai JP, Wong KK, Yeung ML, Zhou J, Au-Yeung RK, Yuan S, Jin DY, Kok KH, **Perlman S**, Chan JF, Yuen KY. Targeting highly pathogenic coronavirus-induced apoptosis reduces viral pathogenesis and disease severity, *Sci Adv*. 2021 June 16;7(25):eabf8577. PMID:34134991. PMCID: PMC8208716. doi: 10.1126/sciadv.abf8577.
249. Ortiz ME, Kobayashi T, Imborek K, Alsuhaibani M, Holley S, Trannel A, Marra AR, Etienne W, Jenn KE, Abosi OJ, Meacham H, Sheeler L, Dains A, Kukla ME, McCray PB, **Perlman S**, Ford B, Diekema DJ, Wellington M, Pezzulo AA, Salinas JL. Molecular epidemiology of large coronavirus disease 2019 (COVID-19) clusters before and after the implementation of routine serial testing at an academic medical center in Iowa, 2020, *Infect Control Hosp Epidemiol*. 2021 June 24:1-3. PMID:34229775. PMCID: PMC8267241. doi: 10.1017/ice.2021.301.
250. Vickers MA, Sariol A, Leon J, Ehlers A, Locher AV, Dubay KA, Collins L, Voss D, Odle AE, Holida M, Merrill AE, **Perlman S**, Knudson CM. Exponential increase in neutralizing and spike specific antibodies following vaccination of COVID-19 convalescent plasma donors, *Transfusion*. 2021 July 1;61(7):2099-2106. PMID:33829513. PMCID: PMC8251132. doi: 10.1111/trf.16401.

Stanley Perlman - June 2022

251. Sariol A, **Perlman S**. SARS-CoV-2 takes its Toll, *Nat Immunol*. 2021 July 1;22(7):801-802. PMID:34103714. PMCID: PMC8238877. doi: 10.1038/s41590-021-00962-w.
252. Alshukairi AN, Tolah AM, Dada A, Al-Tawfiq JA, Almagharbi RS, Saeedi MF, Al-Hamzi MA, El-Kafrawy SA, Bahauden HA, El-Saed A, Al-Mozaini MA, Khalid I, Hefni LK, Hassan AM, Alandijany TA, Bajrai LH, Bayumi DT, Albishi GE, Althawadi SI, Zabani NA, **Perlman S**, Azhar EI. Test-based de-isolation in COVID-19 immunocompromised patients: Cycle threshold value versus SARS-CoV-2 viral culture, *Int J Infect Dis*. 2021 July 1;108:112-115. PMID:34004329. PMCID: PMC8123529. doi: 10.1016/j.ijid.2021.05.027.
253. Lowery SA, Sariol A, **Perlman S**. Innate immune and inflammatory responses to SARS-CoV-2: Implications for COVID-19, *Cell Host Microbe*. 2021 July 14;29(7):1052-1062. PMID:34022154. PMCID: PMC8126603. doi: 10.1016/j.chom.2021.05.004.
254. Calisher CH, Carroll D, Colwell R, Corley RB, Daszak P, Drosten C, Enjuanes L, Farrar J, Field H, Golding J, Gorbalenya AE, Haagmans B, Hughes JM, Keusch GT, Lam SK, Lubroth J, Mackenzie JS, Madoff L, Mazet JK, **Perlman SM**, Poon L, Saif L, Subbarao K, Turner M. Science, not speculation, is essential to determine how SARS-CoV-2 reached humans, *Lancet*. 2021 July 17;398(10296):209-211. PMID:34237296. PMCID: PMC8257054. doi: 10.1016/S0140-6736(21)01419-7.
255. Dampalla CS, Zheng J, Perera KD, Wong LR, Meyerholz DK, Nguyen HN, Kashipathy MM, Battaile KP, Lovell S, Kim Y, **Perlman S**, Groutas WC, Chang KO. Postinfection treatment with a protease inhibitor increases survival of mice with a fatal SARS-CoV-2 infection, *Proc Natl Acad Sci U S A*. 2021 July 20;118(29):e2101555118. PMID:34210738. PMCID: PMC8307543. doi: 10.1073/pnas.2101555118.
256. Dampalla CS, Kim Y, Bickmeier N, Rathnayake AD, Nguyen HN, Zheng J, Kashipathy MM, Baird MA, Battaile KP, Lovell S, **Perlman S**, Chang KO, Groutas WC. Structure-Guided Design of Conformationally Constrained Cyclohexane Inhibitors of Severe Acute Respiratory Syndrome Coronavirus-2 3CL Protease, *J Med Chem*. 2021 July 22;64(14):10047-10058. PMID:34213885. PMCID: PMC8276672. doi: 10.1021/acs.jmedchem.1c00319.
257. Ye G, Gallant J, Zheng J, Massey C, Shi K, Tai W, Odle A, Vickers M, Shang J, Wan Y, Du L, Aihara H, Perlman S, LeBeau A, Li F. The development of *Nanosota-1* as anti-SARS-CoV-2 nanobody drug candidates, *eLife*. 2021 August 2;10:e64815. PMID:34338634. PMCID: PMC8354634. doi: 10.7554/eLife.64815.
258. Wang Y, **Perlman S**. COVID-19: Inflammatory Profile, *Annu Rev Med*. 2021 August 26. PMID:34437814. doi: 10.1146/annurev-med-042220-012417.
259. Qing E, Kicmal T, Kumar B, Hawkins GM, Timm E, **Perlman S**, Gallagher T. Dynamics of SARS-CoV-2 Spike Proteins in Cell Entry: Control Elements in the Amino-Terminal Domains, *mBio*. 2021 August 31;12(4):e0159021. PMID:34340537. PMCID: PMC8406164. doi: 10.1128/mBio.01590-21.
260. Littler DR, Mohanty B, Lowery SA, Colson RN, Gully BS, **Perlman S**, Scanlon MJ, Rossjohn J. Binding of a pyrimidine RNA base-mimic to SARS-CoV-2 nonstructural protein 9, *J Biol Chem*. 2021 September 1;297(3):101018. PMID:34331944. PMCID: PMC8317483. doi: 10.1016/j.jbc.2021.101018.
261. Al-Tawfiq JA, Petersen E, Memish ZA, **Perlman S**, Zumla A. Middle East respiratory syndrome coronavirus - The need for global proactive surveillance, sequencing and modeling, *Travel Med Infect Dis*. 2021 September 1;43:102118. PMID:34144180. PMCID: PMC8205546. doi: 10.1016/j.tmaid.2021.102118.

Stanley Perlman - June 2022

262. Xydakis MS, Albers MW, Holbrook EH, Lyon DM, Shih RY, Frasnelli JA, Pagenstecher A, Kupke A, Enquist LW, **Perlman S**. Post-viral effects of COVID-19 in the olfactory system and their implications, *Lancet Neurol*. 2021 September 1;20(9):753-761. PMID:34339626. PMCID: PMC8324113. doi: 10.1016/S1474-4422(21)00182-4.
263. Verma AK, Zheng J, Mack M, Ginhoux F, **Perlman S**. Differential Effects of Prostaglandin D₂ Signaling on Macrophages and Microglia in Murine Coronavirus Encephalomyelitis, *mBio*. 2021 October 26;12(5):e0196921. PMID:34488442. PMCID: PMC8546556. doi: 10.1128/mBio.01969-21.
264. Littler DR, Liu M, McAuley JL, Lowery SA, Illing PT, Gully BS, Purcell AW, Chandrashekar IR, **Perlman S**, Purcell DF J, Quinn RJ, Rossjohn J. A natural product compound inhibits coronaviral replication in vitro by binding to the conserved Nsp9 SARS-CoV-2 protein, *J Biol Chem*. 2021 October 28;297(6):101362. PMID:34756886. PMCID: PMC8553373. doi: 10.1016/j.jbc.2021.101362.
265. Wong LR, **Perlman S**. Immune dysregulation and immunopathology induced by SARS-CoV-2 and related coronaviruses - are we our own worst enemy?, *Nat Rev Immunol*. 2021 November 26;1-10. PMID:34837062. PMCID: PMC8617551. doi: 10.1038/s41577-021-00656-2.
266. Malicoat J, Manivasagam S, Zuñiga S, Sola I, McCabe D, Rong L, **Perlman S**, Enjuanes L, Manicassamy B. Development of a Single-cycle Infectious SARS-CoV-2 Virus Replicon Particle System for use in BSL2 Laboratories, *J Virol*. 2021 December 1:JV10183721. PMID:34851142. doi: 10.1128/JVI.01837-21.
267. Dampalla CS, Rathnayake AD, Perera KD, Jesri AM, Nguyen HN, Miller MJ, Thurman HA, Zheng J, Kashipathy MM, Battaile KP, Lovell S, **Perlman S**, Kim Y, Groutas WC, Chang KO. Structure-Guided Design of Potent Inhibitors of SARS-CoV-2 3CL Protease: Structural, Biochemical, and Cell-Based Studies, *J Med Chem*. 2021 December 5. PMID:34865476. doi: 10.1021/acs.jmedchem.1c01037.
268. Peiris M, **Perlman S**. Unresolved questions in the zoonotic transmission of MERS, *Curr Opin Virol*. 2022 January 6;52:258-264. PMID:34999369. PMCID: PMC8734234. doi: 10.1016/j.coviro.2021.12.013.
269. Muñoz-Fontela C, Widerspick L, Albrecht RA, Beer M, Carroll MW, de Wit E, Diamond MS, Dowling WE, Funnell SG, García-Sastre A, Gerhards NM, de Jong R, Munster VJ, Neyts J, **Perlman S**, Reed DS, Richt JA, Riveros-Balta X, Roy CJ, Salguero FJ, Schotsaert M, Schwartz LM, Seder RA, Segalés J, Vasán SS, Henao-Restrepo AM, Barouch DH. Advances and gaps in SARS-CoV-2 infection models, *PLoS Pathog*. 2022 January 13;18(1):e1010161. PMID:35025969. PMCID: PMC8757994. doi: 10.1371/journal.ppat.1010161.
270. Halfmann PJ, Iida S, Iwatsuki-Horimoto K, Maemura T, Kiso M, Scheaffer SM, Darling TL, Joshi A, Loeber S, Singh G, Foster SL, Ying B, Case JB, Chong Z, Whitener B, Moliva J, Floyd K, Ujie M, Nakajima N, Ito M, Wright R, Uraki R, Warang P, Gagne M, Li R, Sakai-Tagawa Y, Liu Y, Larson D, Osorio JE, Hernandez-Ortiz JP, Henry AR, Cioudieris K, Florek KR, Patel M, Odle A, Wong LR, Bateman AC, Wang Z, Edara VV, Chong Z, Franks J, Jeevan T, Fabrizio T, DeBeauchamp J, Kercher L, Seiler P, Gonzalez-Reiche AS, Sordillo EM, Chang LA, van Bakel H, Simon V, Douek DC, Sullivan NJ, Thackray LB, Ueki H, Yamayoshi S, Imai M, **Perlman S**, Webby RJ, Seder RA, Suthar MS, García-Sastre A, Schotsaert M, Suzuki T, Boon AC, Diamond MS, Kawaoka Y. SARS-CoV-2 Omicron virus causes attenuated disease in mice and hamsters, *Nature*. 2022 January 21. PMID:35062015. doi: 10.1038/s41586-022-04441-6.

Stanley Perlman - June 2022

271. Pan R, Kindler E, Cao L, Zhou Y, Zhang Z, Liu Q, Ebert N, Züst R, Sun Y, Gorbalenya AE, **Perlman S**, Thiel V, **Chen Y**, Guo D. N7-Methylation of the Coronavirus RNA Cap Is Required for Maximal Virulence by Preventing Innate Immune Recognition, *mBio*. 2022 January 25:e0366221. PMID:35073761. doi: 10.1128/mbio.03662-21.
272. Wong LR, Zheng J, Wilhelmsen K, Li K, Ortiz ME, Schnicker NJ, Thurman A, Pezzulo AA, Szachowicz PJ, Li P, Pan R, Klumpp K, Aswad F, Rebo J, Narumiya S, Murakami M, Zuniga S, Sola I, Enjuanes L, Meyerholz DK, Fortney K, McCray, Jr PB, **Perlman S**. Eicosanoid signaling blockade protects middle-aged mice from severe COVID-19, *Nature*. 2022 March 21. PMID:35314834. doi: 10.1038/s41586-022-04630-3.
273. Verma AK, **Perlman S**. Lipid nanoparticle-mRNA: another step in the fight against COVID-19, *Cell Res*. 2022 March 21. PMID:35314770. PMCID: PMC8936036. doi: 10.1038/s41422-022-00647-5.
274. DeGrace MM, Ghedin E, Frieman MB, Krammer F, Grifoni A, Alisoltani A, Alter G, Amara RR, Baric RS, Barouch DH, Bloom JD, Bloyet LM, Bonenfant G, Boon AC, Boritz EA, Bratt DL, Bricker TL, Brown L, Buchser WJ, Carreño JM, Cohen-Lavi L, Darling TL, Davis-Gardner ME, Dearlove BL, Di H, Dittmann M, Doria-Rose NA, Douek DC, Drosten C, Edara VV, Ellebedy A, Fabrizio TP, Ferrari G, Florence WC, Fouchier RA, Franks J, García-Sastre A, Godzik A, Gonzalez-Reiche AS, Gordon A, Haagmans BL, Halfmann PJ, Ho DD, Holbrook MR, Huang Y, James SL, Jaroszewski L, Jeevan T, Johnson RM, Jones TC, Joshi A, Kawaoka Y, Kercher L, Koopmans MP, Korber B, Koren E, Koup RA, LeGresley EB, Lemieux JE, Liebeskind MJ, Liu Z, Livingston B, Logue JP, Luo Y, McDermott AB, McElrath MJ, Meliopoulos VA, Menachery VD, Montefiori DC, Mühlemann B, Munster VJ, Munt JE, Nair MS, Netzl A, Niewiadomska AM, O'Dell S, Pekosz A, **Perlman S**, Pontelli MC, Rockx B, Rolland M, Rothlauf PW, Sacharen S, Scheuermann RH, Schmidt SD, Schotsaert M, Schultz-Cherry S, Seder RA, Sedova M, Sette A, Shabman RS, Shen X, Shi PY, Shukla M, Simon V, Stumpf S, Sullivan NJ, Thackray LB, Theiler J, Thomas PG, Trifkovic S, Türelı S, Turner SA, Vakaki MA, van Bakel H, VanBlargan LA, Vincent LR, Wallace ZS, Wang L, Wang M, Wang P, Wang W, Weaver SC, Webby RJ, Weiss CD, Wentworth DE, Weston SM, Whelan SP, Whitener BM, Wilks SH, Xie X, Ying B, Yoon H, Zhou B, Hertz T, Smith DJ, Diamond MS, Post DJ, Suthar MS. Defining the risk of SARS-CoV-2 variants on immune protection, *Nature*. 2022 March 31. PMID:35361968. doi: 10.1038/s41586-022-04690-5.
275. Sariol A, Zhao J, Abrahante JE, **Perlman S**. Virus-Specific Regulatory T Cells Persist as Memory in a Neurotropic Coronavirus Infection, *J Immunol*. 2022 April 1. PMID:35365567. doi: 10.4049/jimmunol.2100794.
276. Shi J, Zheng J, Zhang X, Tai W, Odle AE, **Perlman S**, Du L. RBD-mRNA vaccine induces broadly neutralizing antibodies against Omicron and multiple other variants and protects mice from SARS-CoV-2 challenge, *Transl Res*. 2022 April 28:S1931-5244(22)00093-7. PMID:35489692. PMCID: PMC9045870. doi: 10.1016/j.trsl.2022.04.007.
277. Channappanavar R, Selvaraj M, More S, **Perlman S**. Alveolar macrophages protect mice from MERS-CoV-induced pneumonia and severe disease, *Vet Pathol*. 2022 May 2:3009858221095270. PMID:35499307. doi: 10.1177/03009858221095270.
278. Qing E, Li P, Cooper L, Schulz S, Jäck HM, Rong L, **Perlman S**, Gallagher T. Inter-domain communication in SARS-CoV-2 spike proteins controls protease-triggered cell entry, *Cell Rep*. 2022 May 3;39(5):110786. PMID:35477024. PMCID: PMC9015963. doi: 10.1016/j.celrep.2022.110786.
279. Huang SC, Pak TK, Graber CP, Searby CC, Liu G, Marcy J, Yaszemski AK, Bedell K, Bui E, **Perlman S**, Zhang Q, Wang K, Sheffield VC, Carter CS. An open source and convenient method for the wide-spread testing of COVID-19 using deep throat sputum

Stanley Perlman - June 2022

samples, PeerJ. 2022 May 10;10:e13277. PMID:35573180. PMCID: PMC9104087. doi: 10.7717/peerj.13277.

280. Alshukairi AN, Al-Omari A, Albeity A, Alandijany TA, Hassan AM, El-Kafrawy SA, Dada A, Al Hroub MK, El-Saed A, Bissar LS, Daghmush RM, Al-Ghamdi SM G, **Perlman S**, Azhar EI, Halabi H. COVID-19 breakthrough infections in rheumatic diseases patients after vaccination, J Infect Public Health. 2022 May 13;15(6):685-688. PMID:35623243. PMCID: PMC9098803. doi: 10.1016/j.jiph.2022.05.005.
281. Dijkman R, Verma AK, Selvaraj M, Ghimire R, Gad HH, Hartmann R, More S, **Perlman S**, Thiel V, Channappanavar R. Effective Interferon Lambda Treatment Regimen To Control Lethal MERS-CoV Infection in Mice, J Virol. 2022 May 19:e0036422. PMID:35588276. doi: 10.1128/jvi.00364-22.
282. Comar CE, Otter CJ, Pfannenstiel J, Doerger E, Renner DM, Tan LH, **Perlman S**, Cohen NA, Fehr AR, Weiss SR. MERS-CoV endoribonuclease and accessory proteins jointly evade host innate immunity during infection of lung and nasal epithelial cells, Proc Natl Acad Sci U S A. 2022 May 24;119(21):e2123208119. PMID:35594398. doi: 10.1073/pnas.2123208119.

Books

1. **Perlman S**. The Nidoviruses: Toward Control of SARS and other Nidovirus Diseases. Edited by: Perlman S, Holmes KV, Springer, New York. 2006.
2. **Perlman S**. Nidoviruses. Edited by: Perlman S, Gallagher T, Snijder E, ASM Press, Washington, DC. 2008.

Chapters

1. **Perlman S**. Effect of cycloheximide on replication and transcription in cells infected with vesicular stomatitis virus. Negative Strand Viruses. Academic Press. 1975. p. 379-85.
2. **Perlman S**, Bell W. Viral meningitis/encephalitis. Conn's Current Therapy. 38th edition. Edited by: Rakel RE, W.B. Saunders Co., Philadelphia. 1985. p. 730-2.
3. Bale Jr JF, **Perlman S**. Slow Virus Infections Due to Unconventional Agents. Clinical Neurology. Edited by: Baker AB, Joynt RJ, Harper & Row. 1986.
4. Bale Jr JF, **Perlman S**. Viral Encephalitis. Clinical Neurology. Edited by: Baker AB, Joynt RJ, Harper & Row. 1986.
5. **Perlman S**, Bell W. Viral meningitis/encephalitis. Conn's Current Therapy. 39th edition. Edited by: Rakel RE, W.B. Saunders Co., Philadelphia. 1986. p. 744-6.
6. Kisker CT, Bohlken D, **Perlman S**, Olson AL, Robillard JE, Clarke W. Regulatory mechanisms controlling prothrombin and the development of blood coagulation factors during gestation. Perinatal Thrombosis and Hemostasis. Edited by: Suzuki S, Hathaway WE, Bonnar J. 1991. p. 125-136.
7. **Perlman S**, Lane TL, Buchmeier MJ. Coronaviruses: Hepatitis, Peritonitis and Central Nervous System Disease. Effects of Microbes on the Immune System. Edited by: Cunningham M, Fujinami RS, Lippincott-Raven. 1999. p. 331-48.
8. Stohlman SA, Bergmann CC, **Perlman S**. Persistent infection by mouse hepatitis virus. Persistent Viral Infections. Edited by: Ahmed R, Chen I, John Wiley & Sons. 1999. p. 537-57.
9. Dandekar A, **Perlman S**. Axons and neurons in coronavirus-induced demyelination. Experimental Models of Multiple Sclerosis. Edited by: Lavi E, Constantinescu CS, Springer. 2005. p. 737-45.

Stanley Perlman - June 2022

10. Kim T, **Perlman S**. The role of T cell epitopes in coronavirus infection. *Experimental Models of Multiple Sclerosis*. Edited by: Lavi E, Constantinescu CS, Springer. 2005. p. 771-9.
11. Bergmann C, **Perlman S**, Stohlman S. The role of T cells in coronavirus induced demyelination. *Experimental Models of Multiple Sclerosis*. Edited by: Lavi E, Constantinescu CS, Springer. 2005. p. 747-57.
12. Dandekar A, **Perlman S**. Severe Acute Respiratory Syndrome (SARS). *Encyclopedia of Life Sciences*. Nature Publishing Group, London. 2006.
13. Lai MM, **Perlman S**, Anderson LJ. Chapter 36. Coronaviridae. *Fields Virology*. Edited by: Knipe DM. 2007. p. 1305-36.
14. **Perlman S**, Butler NS. Neurotropic coronavirus infections. *Neurotropic Viral Infections*. Edited by: Reiss CS, Cambridge University Press. 2008. p. 50-74.
15. Nicholls J, Peiris M, **Perlman S**. Severe Acute Respiratory Syndrome: Epidemiology, pathogenesis and animal models. *Nidoviruses*. Edited by: Perlman S, Gallagher T, Snijder EJ, ASM Press, Washington, DC. 2008.
16. McIntosh K, **Perlman S**. Coronaviridae. *Mandell, Douglass and Bennett's Principles and Practice of Infectious Diseases*. Edited by: Mandell GL, Bennett JE, Dolin R. 2009.
17. de Groot RJ, Baker SC, Baric R, Enjuanes L, Gorbalenya AE, Holmes KV, **Perlman S**, Poon L, Rottier PJ, Talbot PJ, Woo PC, Ziebuhr J. Coronaviridae. *Virus Taxonomy: Ninth Report of the International Committee on Taxonomy of Viruses*. Edited by: King AM Q, Adams MJ, Carstens EB, Lefkowitz EJ, Elsevier Academic Press, San Diego. 2011. p. 774-96.
18. Masters P, **Perlman S**. Coronaviridae. *Fields Virology*. Edited by: Knipe DM. 2013. p. 825-58.
19. McIntosh K, **Perlman S**. Coronaviridae. *Mandell, Douglass and Bennett's Principles and Practice of Infectious Diseases*. Edited by: Mandell GL, Bennett JE, Dolin R. 2014. p. 1928-36.
20. **Perlman S**, Wheeler DL. Neurotropic coronavirus infections. *Neurotropic Viral Infections*. Edited by: Reiss CS, Springer. 2016. p. 115-148.
21. **Perlman S**, McIntosh K. Chapter 155. Coronaviruses, Including Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, 9th Edition*. Edited by: Bennett JE, Dolin R, Blaser MJ, Elsevier. 2019. p. 2072-2080.
22. **Perlman S**, Masters P. Coronaviridae. *Fields Virology: Emerging Viruses*. Edited by: Howley PM, Knipe DM, Wolters Kluwer. 2020.

Reviews

1. **Perlman S**. Pathogenesis of coronavirus-induced infections. Review of pathological and immunological aspects, *Adv Exp Med Biol*. 1998;440:503-13. PMID:9782322.
2. Haring J, **Perlman S**. Mouse hepatitis virus, *Curr Opin Microbiol*. 2001 August;4(4):462-6. PMID:11495812.
3. **Perlman S**, Wu GF. Selection of and evasion from cytotoxic T cell responses in the central nervous system, *Adv Virus Res*. 2001;56:219-42. PMID:11450301.
4. **Perlman S**, Dandekar AA. Immunopathogenesis of coronavirus infections: implications for SARS, *Nat Rev Immunol*. 2005 December;5(12):917-27. PMID:16322745. doi: 10.1038/nri1732.

Stanley Perlman - June 2022

5. Templeton SP, **Perlman S**. Pathogenesis of acute and chronic central nervous system infection with variants of mouse hepatitis virus, strain JHM, *Immunol Res*. 2007;39(1-3):160-72. PMID:17917063.
6. **Perlman S**, Netland J. Coronaviruses post-SARS: update on replication and pathogenesis, *Nat Rev Microbiol*. 2009 June;7(6):439-50. PMID:19430490. PMCID: PMC2830095. doi: 10.1038/nrmicro2147.
7. **Perlman S**. The Middle East respiratory syndrome--how worried should we be?, *MBio*. 2013 August 20;4(4):e00531-13. PMID:23963179. PMCID: PMC3747588. doi: 10.1128/mBio.00531-13.
8. Zumla A, Hui DS, **Perlman S**. Middle East respiratory syndrome, *Lancet*. 2015 September 5;386(9997):995-1007. PMID:26049252. PMCID: PMC4721578. doi: 10.1016/S0140-6736(15)60454-8.
9. Zheng J, **Perlman S**. Immune responses in influenza A virus and human coronavirus infections: an ongoing battle between the virus and host, *Curr Opin Virol*. 2017 November 20;28:43-52. PMID:29172107. doi: 10.1016/j.coviro.2017.11.002.
10. Fehr A, Jankevicius G, Ahel I, **Perlman S**. Viral Macrodomains: Unique Mediators of Viral Replication and Pathogenesis, *Trends Microbiol*. 2018 July;26(7):598-610. PMID:29268982. PMCID: PMC6003825. doi: 10.1016/j.tim.2017.11.011.
11. Sariol A, **Perlman S**. Lessons for COVID-19 Immunity from Other Coronavirus Infections, *Immunity*. 2020 August 18;53(2):248-263. PMID:32717182. PMCID: PMC7359787. doi: 10.1016/j.immuni.2020.07.005.
12. Wang Y, Grunewald M, **Perlman S**. Coronaviruses: An Updated Overview of Their Replication and Pathogenesis, *Methods Mol Biol*. 2020;2203:1-29. PMID:32833200. doi: 10.1007/978-1-0716-0900-2_1.

Abstract

1. Penman S, Abelson H, Hirsch M, **Perlman S**. The poly (A)-containing RNA in mitochondria, *International Conference Biogenesis of Mitochondria*, Bari, Italy. 1973 June.
2. Denison M, **Perlman S**. In vitro translation of coronavirus MHV-A59 virion RNA, *American Society for Virology*, Albuquerque, NM. 1985.
3. Murph JR, Bale, Jr JF, **Perlman S**, Swack NS. The prevalence of cytomegalovirus infection in a midwest day care center, *Pediatr Res*. 1985;19:205A.
4. Denison M, **Perlman S**. Translation of murine coronavirus virion RNA, *Pediatr Res*. 1985.
5. **Perlman S**, Schelper R, Bolger E, Ries D. Development of subacute demyelinating encephalomyelitis in mice infected with mouse hepatitis virus, strain JHM, *Pediatr Res*. 1986;20:318A.
6. Denison M, **Perlman S**. In vitro translation of virion RNA of mouse hepatitis virus A59, a murine coronavirus, *Pediatr Res*. 1986;20:308A.
7. **Perlman S**, Denison M. Identification of the N-terminal putative polymerase protein of coronavirus MHV A59, *Third International Coronavirus Symposium*, Asilomar, CA. 1987.
8. **Perlman S**, Schelper R, Ries D. Maternal antibody modulated infection in C57BL/6 and BALB/c mice, *Third International Coronavirus Symposium*, Asilomar, CA. 1987.
9. Kisker CT, **Perlman S**, Bohlken DP, Wicklund B. Prothrombin messenger RNA during fetal and neonatal development, *APS/SBR*. 1988.

Stanley Perlman - June 2022

10. Kisker CT, **Perlman S**, Bohlken DP, Wicklund B. Prothrombin messenger RNA during fetal and neonatal development, *Pediatr Res.* 1988;23(4).
11. Olson AL, **Perlman S**, Kisker CT. Cortisol-stimulated prothrombin gene expression during gestation, *Blood.* 1989;74:290a.
Presented at American Society of Hematology
12. Jacobsen G, **Perlman S**. Localization of virus in mice infected persistently with MHV-JHM, Fourth International Coronavirus Symposium, Cambridge, England. 1989.
13. Olson AL, **Perlman S**, Kisker CT. Prothrombin gene transcription rate during gestation: Fetal lamb model, *Pediatr Res.* 1989;25(4):271A.
Presented at Society for Pediatric Research
14. Kisker CT, Olson AL, **Perlman S**. Prothrombin gene transcription rate during gestation: Fetal lamb model, *Thromb Haemost.* 1989;62:300.
Presented at XIth Congress of International Society on Thrombosis and Haemostasis, Tokyo, Japan
15. Robillard JE, Kirby RF, Page WV, Olson AL, **Perlman S**. Effect of dietary salt manipulation on kidney renin gene expression in artificially-reared newborn WKY rats, *JASN.* 1990;1(4):425.
16. Robillard JE, Kirby RF, Page WV, Olson AL, **Perlman S**. Effect of dietary salt manipulation on kidney renin gene expression in artificially-reared newborn WKY rats, *Pediatr Res.* 1990;27(4, Part 2):337A.
17. Oleszak EL, **Perlman S**, Leibowitz JL. Molecular mimicry between Fc gamma receptor and mouse hepatitis virus (MHV) S peplomer protein, *FASEB.* 1991.
18. Barnett EM, Cassell M, **Perlman S**. Tracing olfactory pathways in the mouse with a coronavirus, *Society for Neuroscience.* 1991;17(2):1511.
19. Jacobsen GL, **Perlman S**, Evans GD, Barnett EM, Walton RE. Herpes spread from pulp to CNS via inferior alveolar nerve, *International Association for Dental Research.* 1992.
20. Barnett E, **Perlman S**. MHV and HSV-1 move along different olfactory pathways after intranasal inoculation, *American Society for Virology.* 1992.
21. Barnett E, **Perlman S**. MHV and HSV-1 move along different olfactory pathways after intranasal inoculation, *Fifth International Coronavirus Symposium, Chantilly, France.* 1992.
22. Gallagher T, Buchmeier M, **Perlman S**. Receptor-independent spread of a neurotropic coronavirus infection, *Fifth International Coronavirus Symposium, Chantilly, France.* 1992.
23. Chao C, **Perlman S**, Dailey MO. Regulation of gp90MEL-14 (LECAM-1) mRNA by activated T cells, *FASEB J.* 1992;6:1142.
24. Robillard JE, Page WV, Smith FG, Segar JL, **Perlman S**. Renal nerves increase renin gene expression and renin secretion at birth, *Ninth Congress of the International Pediatric Nephrology Association, Jerusalem, Israel.* 1992.
25. Robillard JE, Page WV, Smith FG, Segar JL, **Perlman S**. Renal nerves increase renin gene expression and renin secretion at birth, *Pediatr Res.* 1992;31(4, Part 2).
Convention Center Baltimore, MD, May 4-7, 1992
26. Barnett EM, Evans GD, Cassell MD, **Perlman S**. Anterograde transneuronal spread of herpes simplex virus from the murine pulp to two cortical areas associated with jaw movement, *Society for Neuroscience Abstracts.* 1993;19(2):1210.

Stanley Perlman - June 2022

27. Barnett EM, **Perlman S**. Herpes simplex encephalitis resulting from trigeminal infection via the tooth pulp in Balb/c mice, American Society for Virology. 1993.
28. Jacobsen G, Barnett EM, Evans G, Walton R, **Perlman S**. Herpes spread from pulp into CNS extensions of trigeminal nerve, International and American Association for Dental Research. 1993.
29. Pettit DL, **Perlman S**, Malinow R. Postsynaptic expression of constitutively active CaMKII occludes LTP in the hippocampal slice, Neuroscience Abstracts. 1993;19:703.1.
30. Castro RF, **Perlman S**. Primary cytotoxic T lymphocyte activity in mice infected with mouse hepatitis virus strain JHM, Abstr 12th Annu Meet Am Soci Virol. 1993:A75, abstr 32-8.
31. Barnett EM, Evans GD, Cassell MD, **Perlman S**. Anterograde viral tracing of trigeminal pain pathways from the tooth pulp to cortex using herpes simplex virus, Pediatr Res. 1994;35(4):378A.
32. Evans GD, Barnett EM, Jacobsen GL, Cassell M, **Perlman S**. Trigeminal herpes infection via murine pulp models human herpetic encephalitis, J Dent Res. 1994;73(IADR Abstracts):299.
33. Loihl A, Grzybicki D, Kardos S, **Perlman S**, Murphy S. Expression of nitric oxide synthase Type II in the CNS during acute and persistent hepatitis virus infection, Society for Neuroscience. 1995.
34. Castro RF, **Perlman S**. Identification of CTL epitopes within the surface (S) glycoprotein of a mouse neurotropic coronavirus and their possible role in viral demyelinating disease, J Cell Biochem. 1995;Supple:306, abstr J2-245.
35. **Perlman S**, Castro RF, Sun N. Role of astrocytes and cytotoxic T cells in mice with chronic demyelination caused by MHV-JHM, Abstr 14th Annu Meet Am Soc Virol. 1995.
36. **Perlman S**, Pewe L. A high rate of mutation in the dominant CD8+ T cell epitope occurs during the course of the persistent CNS infection caused by mouse hepatitis virus, Abstr 15th Annu Meet Am Soc Virol. 1996.
37. Xue S, **Perlman S**. Identification of CD4+ T cell epitopes within the S glycoprotein of mouse hepatitis virus, Abstr 15th Annu Meet Am Soc Virol, London, Ontario. 1996.
38. Xue S, **Perlman S**. Recognition of M and S proteins by CD4 T cells in the CNS of mice infected with mouse hepatitis virus, 16th Ann Meeting of the Amer Soc Virol, Bozeman, MT. 1997.
39. Wu G, **Perlman S**. Apoptosis in MHV-infected mice, International Meeting for Neuroimmunology, Montreal, Canada. 1998.
40. **Perlman S**, Pewe L. CTL escape mutants cause increased mortality and morbidity in mice infected with mouse hepatitis virus, strain JHM, Keystone Symposium: Molecular Aspects of Viral Immunity, Tamarron, CO. 1998.
41. Xue S, Pewe L, **Perlman S**. Recognition of additional CTL epitopes and TCR usage in mice infected MHV CTL escape mutants, 17th Meeting of Amer Soc Virol, Vancouver, BC. 1998.
42. **Perlman S**, Pewe L. CTL escape mutants are selected in the presence of a polyclonal T cells response in MHV-infected mice: Demonstration with MHC classI/peptide tetramers, 18th Annual Meeting of the Amer Soc Virol, Amherst, MA. 1999.
43. Wu G, **Perlman S**. Immune-mediated mechanisms of demyelination following MHV-JHM infection of the murine CNS, 18th Annual Meeting of the Amer Soc Virol, Amherst, MA. 1999.

Stanley Perlman - June 2022

44. Ontiveros E, Kuo L, Masters P, **Perlman S**. Analysis of MHV-JHM gene 4 KO and CD4 T cell epitope escape recombinants, 20th Ann Meeting of the Amer Soc Virol, Madison, WI. 2001.
45. Ontiveros E, Kuo L, Masters P, **Perlman S**. Analysis of nonessential gene function in recombinant MHV-JHM, Coronavirus meeting, Pennsylvania. 2001.
46. Haring J, Pewe L, **Perlman S**. Characterization of the CD4 T cell response following CNS infection with MHV-JHM, 20th Ann Meeting of the Amer Soc Virol, Madison, WI. 2001.
47. **Perlman S**, Pewe L. Demyelination in RAG1 KO mice infected with mouse hepatitis virus, *J Neuroimmunol*. 2001;118:8.
Plenary presentation at the International Society of Neuroimmunology, Edinburgh, Scotland
48. Dandekar A, Wu G, Pewe L, **Perlman S**. T cell mediated axonal damage in a coronavirus-induced demyelinating disease, 20th Ann Meeting of the Amer Soc Virol, Madison, WI. 2001.
49. Wu G, Dandekar A, Pewe L, **Perlman S**. The role of CD4 and CD8 T cells in MHV-JHM-induced demyelination, Coronavirus meeting, Pennsylvania. 2001.
50. Dandekar A, **Perlman S**. Demyelination is mediated by gamma-delta T cells in mice infected with a neurotropic coronavirus, 4th International Symposium of NeuroVirology, Dusseldorf, Germany. 2002.
51. Dandekar A, Jacobsen G, Waldschmidt T, **Perlman S**. Antibody suppression of CTL escape in mice chronically infected with mouse hepatitis virus, strain JHM, IXth International Symposium on Nidoviruses, Egmond aan Zee, The Netherlands. 2003.
52. Ontiveros E, Kim T, Gallagher T, **Perlman S**. Enhanced neurovirulence mediated by mouse hepatitis virus-JHM is associated with a S310G change in the spike glycoprotein, IXth International Symposium on Nidoviruses, Egmond aan Zee, The Netherlands. 2003.
53. Kim T, **Perlman S**. Selection of CTL escape variants in mice infected with recombinant MHV, IXth International Symposium on Nidoviruses, Egmond aan Zee, The Netherlands. 2003.
54. Dandekar A, Anghelina D, **Perlman S**. Interferon-g mediated bystander demyelination in a coronavirus model of multiple sclerosis, *FASEB J*. 2004;18:A457 (335.4).
55. Kim T, **Perlman S**. Interplay of complement and Fc receptors in antibody-induced demyelinating disease in mice infected with a neurotropic coronavirus, *FASEB J*. 2004;18:A1163 (778.3).
56. Butler N, Pewe L, **Perlman S**. A murine model of human coronavirus infection, Xth International Nidovirus Symposium, Colorado Springs, CO. 2005.
57. Pewe L, Zhou H, Netland J, Tangadu C, Shi L, Look D, Gallagher T, **Perlman S**. A SARS-CoV-specific protein enhances virulence of an attenuated murine coronavirus, Xth International Nidovirus Symposium, Colorado Springs, CO. 2005.
58. Zhou H, **Perlman S**. In vitro and in vivo infection of dendritic cells by mouse hepatitis virus strain JHM, Xth International Nidovirus Symposium, Colorado Springs, CO. 2005.

Comment, Editorial

1. **Perlman S**. Another Decade, Another Coronavirus, *N Engl J Med*. 2020 February 20;382(8):760-762. PMID:31978944. doi: 10.1056/NEJMe2001126.

Comment, Letter

1. **Perlman S.** COVID-19 poses a riddle for the immune system, *Nature*. 2020 August 1;584(7821):345-346. PMID:32807916. doi: 10.1038/d41586-020-02379-1.

Commentary

1. **Perlman S, Zhao J.** Human coronavirus EMC is not the same as severe acute respiratory syndrome coronavirus, *MBio*. 2013 January 15;4(1):e00002-13. PMID:23322635. PMCID: PMC3551544. doi: 10.1128/mBio.00002-13.
2. Gallagher T, **Perlman S.** Public health: Broad reception for coronavirus, *Nature*. 2013 March 14;495(7440):176-7. PMID:23486053. doi: 10.1038/495176a.
3. **Perlman S, McCray PB.** Person-to-person spread of the MERS coronavirus--an evolving picture, *N Engl J Med*. 2013 August 1;369(5):466-7. PMID:23902487. doi: 10.1056/NEJMe1308724.

Letter

1. Calisher C, Carroll D, Colwell R, Corley RB, Daszak P, Drosten C, Enjuanes L, Farrar J, Field H, Golding J, Gorbalenya A, Haagmans B, Hughes JM, Karesh WB, Keusch GT, Lam SK, Lubroth J, Mackenzie JS, Madoff L, Mazet J, Palese P, **Perlman S**, Poon L, Roizman B, Saif L, Subbarao K, Turner M. Statement in support of the scientists, public health professionals, and medical professionals of China combatting COVID-19, *Lancet*. 2020 March 7;395(10226):e42-e43. PMID:32087122. doi: 10.1016/S0140-6736(20)30418-9.
2. Lipsitch M, **Perlman S**, Waldor MK. Testing COVID-19 therapies to prevent progression of mild disease, *Lancet Infect Dis*. 2020 May 6:S1473-3099(20)30372-8. PMID:32618282. PMCID: PMC7202831. doi: 10.1016/S1473-3099(20)30372-8.
3. Loftus RW, Dexter F, Evans L, Robinson A, Odle A, **Perlman S.** Evidence-based intraoperative infection control measures plus feedback are associated with attenuation of severe acute respiratory syndrome coronavirus-2 detection in operating rooms, *Br J Anaesth*. 2022 April 29:S0007-0912(22)00200-8. PMID:35643533. doi: 10.1016/j.bja.2022.04.018.

Proceedings

1. Price R, Singer R, **Perlman S**, Hirsch M, Penman S. RNA synthesis and processing in the mammalian cell nucleus, *Proc Australian Biochem Soc*. 1973;5:117-32.

Published Erratum

1. Wong LR, **Perlman S.** Author Correction: Immune dysregulation and immunopathology induced by SARS-CoV-2 and related coronaviruses - are we our own worst enemy?, *Nat Rev Immunol*. 2022 March 1;22(3):200. PMID:34921295. PMCID: PMC8678576. doi: 10.1038/s41577-021-00673-1.

Symposium Proceedings

1. Penman S, Fan H, **Perlman S**, Rosbash M, Weinberg R, Zylber E. Distinct RNA Synthesis Systems of the HeLa Cell, *Cold Spring Harb Symp Quant Biol*. 1970;35:561-75.
2. **Perlman S**, Huang AS. Transcription and replication of vesicular stomatitis virus RNA, Academic Press, New York. 1973:97-103.

Technical Note

1. Jobin W, Ginsburg E, **Perlman S**. Rat control: A strategy for Boston, MIT Department of Civil Engineering, Hydrodynamics Laboratory. 1969;Technical Note No. 14.

Intellectual Property (e.g. Patents, Copyrights)

1. Chang, K.-O., Kim, Y., Groutas, W., Perlman, S. 63/143,627, "Conformationally-constrained Cyclohexane Inhibitors of 3C or 3C-like Proteases."
Filed January 29, 2022

B. Media Contributions

January 16, 2020	TV, abc News
January 20, 2020	TV, WWAY TV
January 25, 2020	Radio, NPR
January 28, 2020	Magazine, Science News
January 28, 2020	Newspaper, The Daily Iowan
February 7, 2020	On-line, TRT World Now
February 24, 2020	Magazine, The Scientist
March 3, 2020	Newspaper, Boston Globe
March 9, 2020	Newspaper, Des Moines Register
March 9, 2020	Magazine, Nature
March 9, 2020	On-line, Net News Ledger
March 14, 2020	Radio, NPR
March 16, 2020	Radio, WBUR
March 25, 2020	Newspaper, Iowa City Press-Citizen
March 26, 2020	TV, KCCI Des Moines
March 31, 2020	Magazine, Science
April 6, 2020	Radio, MPR News
April 13, 2020	On-line, World Health Organization
April 16, 2020	On-line, This Week in Virology
April 17, 2020	TV, abc News
April 22, 2020	TV, KCCI Des Moines
April 27, 2020	TV, CBS
May 7, 2020	Newspaper, The New York Times
May 12, 2020	On-line, University of Minnesota Center for Infectious Disease Research and Policy
May 15, 2020	TV, KCCI Des Moines
May 20, 2020	Magazine, Genetic Engineering & Biotechnology News
May 21, 2020	Magazine, Smithsonian Magazine

Stanley Perlman - June 2022

June 11, 2020	Magazine, The Economist
June 19, 2020	Newspaper, Iowa City Press-Citizen
June 2020	Magazine, Iowa Magazine
July 2, 2020	On-line, Clinical Trials
July 21, 2020	Magazine, Mother Jones
July 22, 2020	Magazine, National Geographic
July 28, 2020	Radio, WAMU
July 29, 2020	TV, Iowa's News Now
2020	On-line, Apple Podcasts
2020	Radio, Iowa Public Radio
2020	Radio, Iowa Public Radio

C. Areas of Research Interest

Infectious Diseases.

RNA virus pathogenesis.

SARS-CoV biology and pathogenesis.

Virus-induced demyelination.

D. Grants

Grant

Funded

Role of microglia in MHV-induced demyelination

US Department of Health & Human Services, National Institutes of Health

R01 NS036592

September 1, 1997 - January 31, 2022

Percent effort: 20

Perlman, Stanley (Principal Investigator)

Option 12.3C: SAVE - Variant Pipeline - in vivo testing (MOD 2)

NIH/St. Jude Children's Research Hospital

May 15, 2021 - May 14, 2022

Perlman, Stanley (Principal Investigator)

PPG: SARS-CoV-Host Cell Interactions and Vaccine Development

US Department of Health & Human Services, National Institutes of Health

P01 AI060699

August 1, 2004 - July 31, 2022

Percent effort: 20

Perlman, Stanley (Principal Investigator)

Role of eicosanoids in pathogenic human CoV infections

US Department of Health & Human Services, National Institutes of Health

R01 AI129269

September 23, 2016 - August 31, 2022

Stanley Perlman - June 2022

Percent effort: 20
Perlman, Stanley (Principal Investigator)

Small Molecule Protease Inhibitors against MERS-CoV
Kansas State University - US Department of Health & Human Services, National Institutes of Health

May 15, 2018 - April 30, 2023
Percent effort: 10
Perlman, Stanley (Principal Investigator)

Structure-based design of coronavirus subunit vaccines
New York Blood Center - US Department of Health & Human Services, National Institutes of Health

May 21, 2018 - April 30, 2023
Percent effort: 10
Perlman, Stanley (Principal Investigator)

Regulation of the host immune response to influenza by the checkpoint receptor Tim3
US Department of Health & Human Services, National Institutes of Health

R01 HL148758
May 1, 2020 - April 30, 2025
Percent effort: 0.5
Perlman, Stanley (Co-Investigator), Cho, Josalyn (Principal Investigator)

Novel nanobodies to prevent and treat SARS-CoV-2 and other pathogenic human coronaviruses
New York Blood Center - US Department of Health & Human Services, National Institutes of Health

July 9, 2020 - June 30, 2025
Percent effort: 5
Perlman, Stanley (Principal Investigator)

Training in Molecular Virology, Viral Pathogenesis and Viral Vectors
US Department of Health & Human Service, National Institutes of Health

T32 AI007533
June 1, 2021 - May 31, 2026
Perlman, Stanley (Principal Investigator)

Completed

Immune Response to West Nile Virus in Mice
US Department of Health & Human Services, National Institutes of Health

WU-14-10
March 1, 2012 - October 31, 2014
\$293,973
Percent effort: 0.9
Perlman, Stanley (Principal Investigator)

Role of Anti-SARS-CoV T Cell Response in Pathogenesis
US Department of Health & Human Services, National Institutes of Health

R01 AI091322
June 1, 2011 - May 31, 2017
\$1,864,642
Percent effort: 21.7

Stanley Perlman - June 2022

Perlman, Stanley (Principal Investigator)

Pathogenesis of Demyelination in Mice Infected with a Neurotropic Coronavirus

National Multiple Sclerosis Society

RG 2864

April 1, 1997 - March 31, 2019

\$1,026,672

Percent effort: 10

Perlman, Stanley (Principal Investigator)

Contract

Funded

A Rapid-Response Platform to Develop & Deliver TIPs (Therapeutic Interfering Particles) Against Respiratory Viral Threats, Including MERS-CoV

Autonomous Therapeutics Inc. - US Department of Defense, Defense Advanced Research Projects Agency

November 7, 2019 - April 6, 2022

\$244,629

Percent effort: 10

Perlman, Stanley (Principal Investigator)

Effect of DP-1 inhibitor on Coronavirus infection

Bioage Labs, Inc

October 1, 2020 - September 30, 2022

Percent effort: 0

Perlman, Stanley (Principal Investigator)

Collaboration for reagents to characterize immune responses to SARS-CoV2

Hackensack Meridian Health

December 8, 2020 - December 31, 2022

Percent effort: 0

Perlman, Stanley (Principal Investigator)

Completed

Industry research of COVID-19 related assays

Eli Lilly

April 4, 2020 - April 3, 2021

Percent effort: 2

Perlman, Stanley (Principal Investigator)

Studies to establish the EC50 and CC50 values for AbbVie antiviral drugs

AbbVie, Inc

April 8, 2020 - April 7, 2021

Percent effort: 0

Perlman, Stanley (Principal Investigator)

E. Presentations

Co-Organizer

2016

Indo-US Symposium on Central Nervous System Viral Infection and Its Therapy, Jalpaiguri, West Bengal India. Perlman, S.

Stanley Perlman - June 2022

Invited Lecture

1990	The Scripps Research Institute. Perlman, S.
1992	Loyola University School of Medicine, Maywood, Illinois. Perlman, S.
1995	Case Western University. Perlman, S.
1997	International Nidovirus meeting. Perlman, S.
1997	University of North Carolina. Perlman, S.
1997	University of Pennsylvania. Perlman, S.
1997	University of Southern California. Perlman, S.
1999	Gordon Conference on Neurovirology. Perlman, S.
1999	Northwestern University. Perlman, S.
1999	The Scripps Research Institute. Perlman, S.
1999	University of Nebraska. Perlman, S.
2000	Iowa State University, Ames, Iowa. Perlman, S.
2000	University of California, Davis. Perlman, S.
2000	University of California, Irvine. Perlman, S.
2000	University of Utah. Perlman, S.
2001	6th International Congress of Neuroimmunology. Perlman, S.
2001	Trudeau Institute. Perlman, S.
2002	University of Chicago. Perlman, S.
2002	University of Texas Medical Branch at Galveston. Perlman, S.
2003	University of Colorado. Perlman, S.
2003	University of Oregon. Perlman, S.
2004	Austin Hospital. Perlman, S.
2004	Burnet MacFarlane Institute Australia. Perlman, S.
2004	New York Academy of Sciences. Perlman, S.
2004	University of Cincinnati. Perlman, S.
2004	University of Melbourne Australia. Perlman, S.
2005	Ohio State University. Perlman, S.
2005	University of North Carolina. Perlman, S.
2006	Emory University. Perlman, S.
2007	Centers for Disease Control. Perlman, S.
2007	Cleveland Clinic. Perlman, S.
2007	University of Texas Medical Branch at Galveston. Perlman, S.
2008	Cornell University. Perlman, S.
2008	Mt Sinai School of Medicine. Perlman, S.
2008	University of Madrid Spain. Perlman, S.
2008	University of Maryland. Perlman, S.

Stanley Perlman - June 2022

2008 University of Melbourne Australia. Perlman, S.

2009 Mayo Clinic. Perlman, S.

2009 University of Arkansas. Perlman, S.

2009 University of California at Irvine. Perlman, S.

2009 University of KwaZulu-Natal South Africa. Perlman, S.

2010 Washington University, St Louis. Perlman, S.

2011 University of Washington. Perlman, S.

2012 Medical College of Wisconsin. Perlman, S.

2012 Ragon Institute, Harvard Medical School. Perlman, S.

2012 University of Alabama. Perlman, S.

2012 University of British Columbia Canada. Perlman, S.

2013 University of New Mexico. Perlman, S.

2013 University of Texas Medical Branch at Galveston. Perlman, S.

2014 ASM Biodefense 2014. Perlman, S.

2014 Johns Hopkins University. Perlman, S.

2014 University of Chicago. Perlman, S.

2014 University of Colorado. Perlman, S.

2014 University of Florida. Perlman, S.

2015 Central Society for Clinical and Translational Research, Chicago, Illinois. Perlman, S.

2015 Northwestern University. Perlman, S.

2015 Saudi Arabian Society for Microbiology and Infectious Diseases, Jeddah Saudi Arabia. Perlman, S.

2015 University of Hong Kong Hong Kong. Perlman, S.

2015 University of North Carolina. Perlman, S.

2016 2016 Collaborative Antiviral Testing Group, National Institutes of Health. Perlman, S.

2016 50th Anniversary US-Japan Cooperative Medical Sciences Program. Perlman, S.

2016 7th International Symposium of Emerging Viral Diseases, Wuhan China. Perlman, S.

2016 Academia Sinica, Taipei Taiwan. Perlman, S.

2016 Distinguished Scientist Seminar Seroes, Rocky Mountain National Laboratories, NIAID. Perlman, S.

2016 Guangzhou Institute of Respiratory Disease, Guangdong China. Perlman, S.

2016 Huazhong Agricultural University, Wuhan China. Perlman, S.

2016 MERS Animal Models, National Institutes of Health. Perlman, S.

2016 Military Veterinary Institute, Changchun China. Perlman, S.

Stanley Perlman - June 2022

2016 National Chung Hsing University, Taichung Taiwan. Perlman, S.
2016 National Health Research Institute, Maoli Taiwan. Perlman, S.
2016 Stohlman Symposium, Cleveland Clinic. Perlman, S.
2017 Mayo Clinic, Minnesota. Perlman, S.
2017 Oregon Health and Sciences University, Oregon. Perlman, S.
2017 University of Minnesota. Perlman, S.
2020 9th International Symposium on Emerging Viral Disease, Wuhan China. Perlman, S.
2020 American Red Blood. Perlman, S.
2020 Arizona State University. Perlman, S.
2020 Broad Institute. Perlman, S.
2020 Center for China and Globalization webinar. Perlman, S.
2020 China Association for International Exchange of Personnel, Response to COVID-19 Outbreak webinar. Perlman, S.
2020 Columbia University. Perlman, S.
2020 COVID-19 Dynamics: State of the Science, University of California, Irvine. Perlman, S.
2020 COVID-19: Understand, Manage, Control, Cell Press-Beijing Conference. Perlman, S.
2020 FOCIS (Federation of Clinical Immunology Societies). Perlman, S.
2020 IDSA COVID-19 podcast series. Perlman, S.
2020 International Society for Vaccines. Perlman, S.
2020 International Society for Vaccines. Perlman, S.
2020 Leiden University. Perlman, S.
2020 Lisie Hospital, Cochi, Kerala, India. Perlman, S.
2020 Mayo Clinic, Clinic Center for Biomedical Discovery Symposium. Perlman, S.
2020 NIAID Post-Acute Sequelae Symposium. Perlman, S.
2020 Purdue University Coppoc Lecture. Perlman, S.
2020 Scripps Research Institute. Perlman, S.
2020 Sloan-Kettering (Immunology student teaching). Perlman, S.
2020 Society for Leukocyte Biology. Perlman, S.
2020 Tyson Foods: Promoting Workplace Safety in the Era of COVID-19: Keeping Employees, Their Families and Communities Healthy and Safe. Perlman, S.
Invited panel member
2020 University of Minnesota, Wesley Spink Lecture. Perlman, S.
2020 University of Notre Dame. Perlman, S.
2020 University of Pennsylvania. Perlman, S.

Stanley Perlman - June 2022

2020	Yale University. Perlman, S.
2021	12th Annual Lundberg-Kienlen Lecture, Oklahoma State University. Perlman, S.
2021	14th Australia Influenza Symposium. Perlman, S.
2021	14th Chinese National Meeting of Virology and the 9th Wuhan International Symposium on Modern Virology. Perlman, S.
2021	2021 Center for Neuroimmunology and Neuroinfectious Diseases Symposium: Post-infectious Brain Disorders, Washington University. Perlman, S.
2021	2021 International Conference on the Korean Society for Molecular and Cellular Biology, JeJu Korea. Perlman, S.
2021	35th Annual Meeting of Indian Academy of Neuroscience. Perlman, S.
2021	Albert Einstein School of Medicine. Perlman, S.
2021	Albert Einstein School of Medicine (Virology class). Perlman, S.
2021	American Association for Cancer Research. Perlman, S.
2021	Calicut Forum of Internal Medicine, Trivandrum, Kerala India. Perlman, S.
2021	COVID-19 Vaccine Research in Animal Models Conference. Perlman, S.
2021	Department of Neurology Grand Rounds, Ohio State University. Perlman, S.
2021	Distinguished UCLA CTSI/Immunology Speaker. Perlman, S.
2021	Federation of Immunological Societies of Asia-Oceania, Busan Korea. Perlman, S.
2021	First Sun Yat-sen International Symposium on Immunology, Guangdong China. Perlman, S.
2021	Institute of Chemical Biology and Drug Discovery 15th Annual Symposium, SUNY, Stony Brook. Perlman, S.
2021	The History of Biology and Medicine Series, The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University. Perlman, S.
2021	University of California, Berkeley. Perlman, S.
2021	University of Iowa. Perlman, S.
2021	University of Wisconsin. Perlman, S.
2022	American Society for Neurochemistry. Perlman, S.
2022	Clinical Neuroscience Research Center, Tulane University. Perlman, S.
2022	Immunisation Coalition, Melbourne Australia. Perlman, S.
2022	Innate Immunity During SARS-CoV-2 Infection and COVID-19, NIAID. Perlman, S.
2022	New England BioLabs. Perlman, S.
2022	Royal Society Science of COVID Meeting, London United Kingdom. Perlman, S.

Stanley Perlman - June 2022

2022 Sex/Gender-Specific COVID-19 Outcomes/Management Relevant for Heart, Lung, Blood, and Sleep (HLBS) Disorders: From Bench to Bedside, NIH. Perlman, S.

2022 University of Minnesota. Perlman, S.

Keynote/Plenary Address

1998 Microbiology symposium, Loyola University School of Medicine. Perlman, S.

2010 Annual meeting of the American Society for Virology. Perlman, S.

2011 American Pediatrics Society. Perlman, S.

2014 2nd Scientific Advisory Board Meeting for Global Centre for Mass Gathering Medicine Saudi Arabia. Perlman, S.

2014 Indo-US Symposium on Viral Infections of the Nervous System. Perlman, S.

2014 XIIIth International Nidovirus Symposium. Perlman, S.

2015 Central Society for Clinical and Translational Research. Perlman, S.

2015 Saudi Arabian Society for Microbiology and Infectious Diseases Saudi Arabia. Perlman, S.

2016 2016 Celebration of Research, University of Florida, Florida. Perlman, S.

2017 FAO-IOE-WHO Global Technical MERS-CoV meeting, Geneva Switzerland. Perlman, S.

2017 Louisiana State University-Center for Molecular and Tumor Virology Symposium. Perlman, S.

2017 Mini-symposium on MERS Hong Kong. Perlman, S.

2017 XIVth International Nidovirus Symposium, Kansas City, Kansas. Perlman, S.

2018 FASEB: Translational Neuroimmunology Conference, Snowmass, Colorado. Perlman, S.

2018 Flyswat Meeting, University of Nebraska Center for Virology. Perlman, S.

2018 ImmunoTx Summit, GTC Bio, San Diego, California. Perlman, S.

2018 Korean Association of Immunology, Seoul Korea. Perlman, S.

2018 Nature Conference on Viral Infection and Immune Response, Shanghai China. Perlman, S.

2018 School of Respiratory Viruses, International Society for Influenza and Other Respiratory Virus Diseases, Beirut Lebanon. Perlman, S.

2018 Wuhan University, Wuhan China. Perlman, S.

2019 Guangzhou Institutes of Biomedicine and Health, Chinese Academy of Sciences. Perlman, S.

2019 Guangzhou Medical Center, Guangzhou China. Perlman, S.

2019 MERS Symposium, University of Hong Kong. Perlman, S.

2019 VI4 Symposium, Vanderbilt University. Perlman, S.

2020 American Society of Gene + Cell Therapy. Perlman, S.

Stanley Perlman - June 2022

2020 Cold Spring Harbor Symposium. Perlman, S.
2020 COVID-19/SARS-CoV-2 Rapid Research Reports CSHAsia. Perlman, S.
Organizer and plenary speaker
2020 Indo-US COVID19 Biology Symposium. Perlman, S.
2020 North Central Branch, ASM. Perlman, S.
2020 Riboclub. Perlman, S.
2020 Society for Experimental Medicine and Biology. Perlman, S.
2020 XVIII UC Irvine Immunology Fair. Perlman, S.
October 2021 La Jolla Immunology Conference: COVID-19 Summit. Perlman, S.
2021 American Association of Immunologists annual meeting. Perlman, S.
2021 Des Moines University. Perlman, S.
2021 EB 2021 (American Physiological Society annual meeting). Perlman, S.
2021 Great Plains Emerging Infectious Diseases Conference. Perlman, S.
2021 Interdisciplinary Symposium on COVID-19, 4 Belgian societies. Perlman, S.
2021 International Society for Neurovirology. Perlman, S.
2021 John B. Little Symposium, Harvard T.H. Chan School of Public Health. Perlman, S.
2021 Neurologic and Psychiatric effects of SARS-CoV-2 infection, NIMH/NINDS symposium. Perlman, S.
2021 NIH Workshop in Immunity, Aging and COVID-19. Perlman, S.
2021 The International Congress of Parkinson's Disease and Movement Disorders. Perlman, S.
2021 World Society for Virology. Perlman, S.
2022 EMBO Workshop on Pathogen Immunity and Signaling, St Malo France. Perlman, S.

Organizer

2005 Xth International Nidovirus Symposium. Perlman, S.

Organizer and invited speaker

2022 Keystone Positive Strand RNA Meeting, Keystone, Colorado. Perlman, S.

Panel

2004 SARS-Coronaviruses and Highly Pathogenic Influenza viruses:
Laboratory Safety and Occupational Health, Wadsworth Center. Perlman, S.
2021 COVID-19 Workshop on Vaccine Efficacy and Safety, DHS University Centers of Excellence. Perlman, S.

IV. SERVICE

A. Professional Service

Ad-hoc Member

1995	National Institutes of Health, Virology Study Section
1997	National Institutes of Health, Experimental Virology Study Section
1998	National Institutes of Health, Experimental Virology Study Section
1998	National Institutes of Health, SBIR Study Section in Microbiology
1999	National Institutes of Health, Virology Study Section
2000	National Institutes of Health, Virology Study Section
2007	National Institutes of Health, VirB Study Section
2008	National Institutes of Health, VirB Study Section
2010	National Institute of Neurological Disorders and Stroke, Board of Scientific Counselors
2010 - Present	National Institutes of Health, multiple study sections

Advisor

2020 - Present	Advisory Committee on Immunization Practices, COVID-19 Working Group
----------------	--

Associate Editor

2008 - 2012	Journal of Immunology
2018 - Present	PLoS Pathogens

Chair

2002	National Institutes of Health, Special Emphasis Panel, ZHD1 DSR-A (Pediatric training grants)
2003	National Institutes of Health, Special Emphasis Panel, SARS-CoV

Councilor for Medical Virology

2013 - 2016	American Society for Virology
-------------	-------------------------------

Editorial Board

1998 - 2007	Journal of Virology
1992 - Present	Virology
2012 - Present	F1000 Research
2014 - Present	Virus Research
2018 - Present	Emerging Viruses and Infection
2018 - Present	Journal of Virology

Member

1991 - 1994	United States Veterans Administration, Merit Review Board in Infectious Diseases
2004	National Institutes of Health, Special Emphasis Panel, SARS-CoV
2007 - 2012	National Multiple Sclerosis Society, Review Panel
2010 - 2012	National Institutes of Health, Systems Biology Working Group
2011 - 2012	St Jude Center of Excellence for Influenza Research and Surveillance, Scientific Advisory Board
2012 - 2014	American Academy of Microbiology, Selection Committee, William A. Hinton Research Training Award
2020	ACIP, COVID-19 Vaccine Safety Technical Sub-Group
2020	Lancet Commission on COVID-19 Task Force on the Origins, Early Control of the Pandemic, and One Health Solutions to Future Pandemic Threats
2020 - Present	American Society for Microbiology, COVID-19 Registry
2020 - Present	DMID, CROMS, Safety Monitoring Committee

Stanley Perlman - June 2022

2020 - Present U.K. Government, Disease Enhancement Working Group, Vaccine Taskforce

Permanent member

2000 - 2004 National Institutes of Health, Virology Study Section
2004 - 2005 National Institutes of Health, VIRA Study Section
2009 - 2015 National Institutes of Health, VirB Study Section

Reviewer

1993 National Institutes of Health, Site Visit to evaluate "Neurological AIDS"
1993 National Institutes of Health, Site Visit to evaluate "Clinical Olfactory Research Center"
1994 National Institutes of Health, Site Visit to evaluate "Coronavirus Neurological Pathogenesis"
1998 National Institutes of Health, Site Visit to evaluate "Pathogenesis of persistent viral injury to the CNS"
1998 National Institutes of Health, Site Visit to evaluate "Clinical Olfactory Research Center"

Reviewer, Ad-hoc

1991 - 1994 United States Veterans Administration, Merit Review Board
2012 Pennsylvania Department of Health
1983 - Present AGE, American Journal of Physiology, Annals of Otology, Archives of Virology, Cell, Cytokine, Gut, Host Cell and Microbe, Journal of Clinical Investigation, Journal of Comparative Neurology, Journal of General Virology, Journal of Immunology, Journal of Infectious Diseases, Journal of Molecular Biology, Journal of Neurochemistry, Journal of Neuropathology and Experimental Neurology, Journal of Neuroscience, Journal of Neurovirology, Journal of the American Medical Association, Journal of Virological Methods, Lancet, Lancet Infectious Diseases, mBio, Molecular Therapy, Nature, Nature Medicine, Nature Methods, Nature Reviews Immunology, Nature Reviews Microbiology, New England Journal of Medicine, Pediatric Infectious Disease Journal, PLOS Medicine, PLOS Pathogens, Proceedings of the National Academy of Science, Rhinology and Laryngology, Science
2000 - Present Burroughs-Wellcome Foundation
2000 - Present Hong Kong Research Board
2000 - Present United States Department of Agriculture
2010 - Present Netherlands National Science Foundation
2010 - Present South Africa National Research Foundation
2015 - Present Swiss National Science Foundation
2020 - Present Austrian National Science Foundation

Senior Editor

2007 - 2017 Journal of Virology
2019 - Present Microbiology and Molecular Biology Reviews

Specialist with COVID-19 Vaccines

2020 - Present US Food and Drug Administration, Vaccines and Related Biological Products Advisory Committee

B. University, College, Department Service

University

1993 - 1994 University Research Day Committee, Chair
1992 - 1995 University Research Day Committee, Member

College

Stanley Perlman - June 2022

1997 - 2003	Medical Scientist Training Program Admissions Committee, Member
2006 - 2008	Medical Scientist Training Program Admissions Committee, Chair
1996 - 2014	BSL3 Facility Oversight Committee, Chair
1993 - Present	BSL3 Facility Oversight Committee, Member

Department

1995 - 2005	Department of Pediatrics Promotions Committee, Member
1996 - 2005	Department of Pediatrics, Vice Chair for Research
1996 - 2005	Department of Pediatrics Promotions Committee, Chair
1996 - 2005	Department of Pediatrics Research and Fellowship Committee, Chair
1999 - 2007	Immunology Program Executive Committee, Member
1998 - 2014	Immunology Program, Graduate Student Affairs Committee, Chair
2006 - Present	Department of Microbiology Promotions Committee, Member
2014 - Present	Immunology Program, Graduate Student Affairs Committee, Member

C. Clinical assignments since last promotion (if applicable)

1993 - 1998	Outpatient <i>Attending, Infectious Diseases, 4 months/year</i>
1998 - 2001	Outpatient <i>Attending, General Pediatrics, 1 month/year</i>
1998 - 2001	Outpatient <i>Attending, Infectious Diseases, 6 months/year</i>
2001 - 2004	Outpatient <i>Attending, Infectious Diseases, 4 months/year</i>
2004 - 2006	Outpatient <i>Attending, Infectious Diseases, 6 months/year</i>