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Education and Training

9/84 - 12/86	University of Wisconsin Center-Rock County, Janesville, WI; A.S. in Science
1/87 - 12/89	University of Wisconsin-Madison, Madison, WI; B.S. (with distinction) in Biochemistry and Molecular Biology
12/89 - 7/90	Undergraduate Research Assistant, Department of Biochemistry, University of Wisconsin-Madison, Madison, WI
8/90 - 5/96	Mayo Medical School, Mayo Clinic and Foundation, Rochester, MN; M.D.
8/90 - 5/96	Mayo Graduate School, Mayo Clinic and Foundation, Rochester, MN; Ph.D. in Immunology
7/96 - 6/98	Resident, Internal Medicine, Department of Medicine, Johns Hopkins Hospital, Baltimore, MD
7/98 - 11/00	Fellow, Infectious Diseases, Department of Medicine, Section of Infectious Diseases, University of Wisconsin Hospital and Clinics, Madison, WI
11/00 - 6/03	Post-doctoral Fellow, Institute for Molecular Virology and Howard Hughes Medical Institute, University of Wisconsin-Madison
1/10	Science & Safety Biosafety Level 3 (BSL-3) Training Program, Emory University, Atlanta, GA

Employment (Academic/Clinical Appointments)

11/00-6/03	Clinical Instructor Department of Medicine, Section of Infectious Diseases University of Wisconsin Hospital and Clinics, Madison, WI
7/03-8/09	Assistant Professor Department of Internal Medicine, Division of Infectious Disease Department of Microbiology & Immunology University of Michigan Medical School, Ann Arbor, MI
9/09-8/14	Associate Professor, with tenure Department of Internal Medicine, Division of Infectious Disease Department of Microbiology & Immunology University of Michigan Medical School, Ann Arbor, MI
9/14-7/15	Professor, with tenure Department of Internal Medicine, Division of Infectious Disease Department of Microbiology & Immunology University of Michigan Medical School, Ann Arbor, MI
8/15-present	Infectious Diseases Specialist Advocate-Aurora Health Care Aurora BayCare Medical Center Green Bay, WI

Certification and Licensure

1999-present Internal Medicine, American Board of Internal Medicine (recertified in 2019)
2001-present Infectious Diseases, American Board of Internal Medicine (recertified in 2021)
1998-present State of Wisconsin Medical License (current)
2003-present State of Michigan Medical License (current)

Honors and Awards

1989 Mary Shine Peterson undergraduate research scholarship
Department of Biochemistry, University of Wisconsin-Madison
1989 Phi Beta Kappa and Phi Kappa Phi Honor Societies
University of Wisconsin-Madison
1989 Ralph B. Abrams undergraduate scholarship
College of Letters and Sciences, University of Wisconsin-Madison
2000 Howard Hughes Medical Institute Research Fellowship for Physicians
Institute for Molecular Virology, University of Wisconsin-Madison
2008 Medical Student Award for Teaching Excellence, University of Michigan Medical School, Ann Arbor, MI
2009 Jerome W. Conn Award for Excellence in Research, University of Michigan Department of Internal Medicine, Ann Arbor, MI
2012 Elected to American Society for Clinical Investigation (ASCI)

Academic Grants (Principal Investigator)

NIH/NIAID; R01 AI089417
"Novel Therapeutics for Neurotropic Alphaviruses"
Dates: 7/1/2010-6/30/2015; Total Direct Costs: $3,135,000

NIH/NIAID; R21AI093642
"Marine Microbial Products as Novel Agents Against Neurotropic Arboviruses"
Dates: 9/30/2011-8/31/2013; Total Direct Costs: $275,000

NIH/NIAID-Region V Great Lakes Regional Center of Excellence (GLRCE) for Biodefense and Emerging Infectious Disease Research, Development Project
"Marine Microbial Products as Novel Agents Against Neurotropic Arboviruses"
Dates: 3/1/2011-2/29/2013; Total Direct Costs: $250,000

NIH/NIAID; R01 AI062749
"Virus-Host Interactions in Replication Complex Assembly"
Dates: 6/1/2005-8/31/2010; Total Direct Costs: $1,000,000

NIH/NIAID; R21 AI76975
"Impact of Neuronal Innate Immunity on Neurotropic Arbovirus Pathogenesis"
Dates: 9/19/2007-5/31/2010; Total Direct Costs: $275,000

NIH/NIAID-Region V Great Lakes Regional Center of Excellence (GLRCE) for Biodefense and Emerging Infectious Disease Research, Career Developmental Project
"Innate Immunity and Alphavirus Neuropathogenesis"
Dates: 3/1/06-2/28/09; Total Direct Costs: $345,000

NIH/NIAID; K08 AI01770
"Host-Pathogen Interactions in Viral Replication"
Dates: 9/30/00-6/15/03; Total Direct Costs: $255,000

Editorial Positions, Boards, and Peer-Review Service

Manuscript review, ad hoc

Cell – Host & Microbe, Journal of General Virology, Journal of Infectious Diseases, Journal of Medical Microbiology, Journal of Virology, PLoS One, PLoS Pathogens, Virology, Virus Research

Grant review, ad hoc

National Science Foundation, 2007, 2008, 2011
University of Michigan, OVPR, Rare Diseases Grant Program, 2008, 2009
University of Michigan, Center for Computational Medicine and Biology (CCMB) Pilot Research Grant Program, 2008
U.S. Army Medical Research and Material Command (USAMRMC), 2010
Welcome Trust/DBT India Alliance, 2010
NIH/NIAID - Special Emphasis Panel (ZRG1-IDM-A-03), Topics in Virology, 2011
University of Michigan, Center for the Discovery of New Medicines (CDNM) Pilot Research Grant Program, 2012

Grant review, study section

NIH/NIAID - Special Emphasis Panel (ZAI1-LG-M-J2), Partnerships for Biodefense, 2010
NIH/NIAID - Special Emphasis Panel (ZAI1-FDS-M-J3), Partnerships for Biodefense, 2011
NIH/NIAID - Special Emphasis Panel (ZAI1-LG-M-M1), Therapeutics for Neurotropic Biodefense Toxins and Pathogens, 2012
NIH/NIAID - Special Emphasis Panel (ZAI1-RRS-M-M3), Host Targeted Interventions as Therapeutics for Infectious Diseases, 2012
NIH/NIAID - Special Emphasis Panel (ZAI1-LR-M-J1), Centers of Excellence for Translational Research (CETR), 2013

Teaching

University of Michigan

2005-2006	ID/Microbiology Sequence Course, Small Group Discussion Leader, University of Michigan Medical School (1 discussion session/yr)
2005-2008	CMB850, Student Seminar evaluator (4 seminars/yr)
2007-2011	ID/Microbiology Sequence Course, Virology lectures (6 lectures, 6.5 h student contact time)
2008-2009	School of Public Health, EPID 703, Arbovirus lecture (1 lecture, 2 h student contact time)
2013	Microbiology 615, Molecular and Cellular Determinants of Viral Pathogenesis (4 lectures, 6 h student contact time)
2013	PIBS 503, Research Responsibility and Ethics, Dual Use Research Issues (1 seminar, 1 h student contact time)

University of Michigan Graduate Students (MPH projects)

2006-2007	Ann Haas (Maassab Award recipient)
2006-2007	Rebekah Kunkel
2010-2011	Kate Altschaefl (Maassab Award recipient)
2010-2011	Rachel Fiddler

University of Michigan Graduate Students (Ph.D. mentorship)

2004-2008 Spencer Weeks (Microbiology & Immunology)
Thesis: "Chaperones and Viral RNA Replication", defended 11/24/2008
Fellowship funding: Molecular Mechanisms of Microbial Pathogenesis training grant (T32-AI007528), and Department of Microbiology & Immunology Willison fellowship

2004-2009 Kenneth Stapleford (Cellular and Molecular Biology)
Thesis: "Polymerase-Membrane Interactions in Viral RNA Replication Complex Assembly", defended 4/24/2009
Fellowship funding: Cellular and Molecular Biology training grant (T32-GM007315)

2006-2010 Daniel Peltier (Microbiology & Immunology; Medical Scientist Training Program-MSTP)
Thesis: "Interactions Between Neuronal Innate Immune Pattern Recognition Receptor Pathways and Neurotropic Arboviruses: Host Measures, Viral Countermeasures, and Potential Therapeutics"; defended 7/9/2010
Fellowship funding: Molecular Mechanisms of Microbial Pathogenesis training grant (T32-AI007528), and Department of Microbiology & Immunology Willison fellowship

2007-2011 Jocelyn Farmer (Microbiology & Immunology; Medical Scientist Training Program-MSTP)
Thesis: "Antiviral type I interferon pathway activity increases with human neuronal development, resulting in enhanced defense against neurotropic arbovirus"; defended 4/15/2011
Fellowship funding: NINDS F30 NS065566 Ruth L. Kirschstein NRSA for M.D./Ph.D. Fellows

2011-2014 Scott Barraza (Medicinal Chemistry, College of Pharmacy); co-mentorship with Dr. Scott Larsen (UM College of Pharmacy)
Thesis: "Development of novel small molecule inhibitors of western equine encephalitis virus"; defended 8/20/2014
Fellowship funding: University of Michigan Rackham Merit Scholarship

2011-2014 Janice Sindac (Medicinal Chemistry, College of Pharmacy); co-mentorship with Dr. Scott Larsen (UM College of Pharmacy)
Thesis: "Development of small molecule antivirals against western equine encephalitis virus"; defended 8/28/2014

University of Michigan Doctoral Thesis Committees

2004-2008 Lisa Gralinski, Microbiology & Immunology
2004-2005 Jessica Flynn, Microbiology & Immunology
2004-2006 Mike McConnell, Microbiology & Immunology
2005-2006 Dawn Newcomb, Molecular and Integrative Physiology
2005-2008 Johanna Abend, Microbiology & Immunology
2006-2010 Michael Swanson, Immunology
2007-2010 Qiong Wong, Molecular and Integrative Physiology
2007-2010 Mary Piper, Cellular and Molecular Biology
2008-2009 Mary Wilson, Microbiology & Immunology
2008-2011 Patrick Vigil, Microbiology & Immunology
2008-2012 Marta Sanchez-Fernandez, Immunology
2008-2012 Sarra Keene, Microbiology & Immunology
2009-2012 Tein-Huei Hsu, Microbiology & Immunology
2010-2012 Meghan Milbrath, Epidemiology, School of Public Health
2010-2013 Nicole Broekema, Microbiology & Immunology

University of Michigan Post-Doctoral Fellows

2007-2009 Weiping Peng, Ph.D.
2007-2010 Joshua Brownlee, M.D. (Pediatric ID fellow), Fellowship funding: Hartwell Foundation Biomedical Research Fellowship
2012-2014 Phillip Delekta, Ph.D.

University of Michigan Junior Faculty Mentorship

2009-2013	Andrew Tai, M.D., Ph.D., Assistant Professor, Department of Internal Medicine, Division of Gastroenterology, co-mentor on NIH/NIAID Career Development Award K08 AI083785
2010-2012	Joshua Brownlee, M.D., Clinical Lecturer, Department of Pediatrics & Communicable Diseases, Division of Infectious Diseases, primary laboratory mentor
2012-2015	Adam Lauring, M.D., Ph.D., Assistant Professor, Departments of Internal Medicine and Microbiology & Immunology, Division of Infectious Diseases

Committee, Organizational, and Volunteer Service

University of Michigan Departmental Committees

2004-2005	Microbiology & Immunology Graduate Studies Committee
2005-2006	Microbiology & Immunology Appointment, Promotions, and Awards Committee
2006-2007	Microbiology & Immunology Postdoctoral Development Committee
2007-2010	Medical School Biosafety Level 3 (BSL3) Core Committee
2007-2010	Microbiology & Immunology Biosafety Level 3 (BSL3) Core Committee
2006-2013	MSTP Career Advisory Committee
2007-2014	Institutional Biosafety Committee
2008-2014	ULAM Animal Biosafety Level 3 (BSL3) Core Virology Module Principal Investigator
2010-2014	Medical School Biosafety Level 3 (BSL3) Facility Oversight Committee
2012-2013	University of Michigan Biologics Oversight Task Force
2013-2014	University of Michigan Biological Safety Program Leadership Team

National Service Committees

2007	American Society for Virology, Membership Review Committee
2008	Session Chair, Viral Pathogenesis, 5th Annual Meeting, Regional Centers of Excellence for Biodefense and Emerging Infectious Diseases Research, Chicago, IL, April, 2008.
2009	Convenor, "Positive-Strand RNA Viruses & Host Pathogenesis" Session, 28th Annual Meeting, American Society for Virology, Vancouver, BC, July, 2009.
2008-2011	American Society for Virology, Membership Review Committee Chair

Volunteer Activity

1999	Visiting missionary physician, Central Africa Medical Mission, Mwembezhi Lutheran Rural Health Center, Zambia, Africa
2002	Physician advisor, Christian Life Resources, ELS, Gift of Life Medical Mission, Ternopil, Ukraine
2010-2014	Physician volunteer, Grace Clinic, Faith in Action, Chelsea, MI
2014-2016	Advisory committee chairman, Lutheran Health Alliance, Kingdom Workers, Wauwatosa, WI
2016-2018	Health and Development Advisory Group, Kingdom Workers, Wauwatosa, WI
2015-present	Board of Directors (Vice-Chairman, 2017-2020; Chair, 2020-present), Kingdom Workers, Pewaukee, WI
2022-present	Management Committee (Chair), Meros Center, Research and Training Community for Christian Health Ministry at Wisconsin Lutheran College, Wauwatosa, WI
2022-present	Board of Regents, Wisconsin Lutheran College, Wauwatosa, WI

Advocate-Aurora Committees

2016-2019	Infection Prevention Committee Chair, Aurora Manitowoc County Medical Center, Two Rivers, WI

PATENTS

Title:	Monoclonal Antibodies Which Promote Central Nervous System Remyelination
Applicants:	Moses Rodriguez and David J. Miller
Serial Number:	08/236,520
Patent Number:	5,591,629 (granted January 7, 1997)
Filed with:	U.S. Patent and Trademark Office, April 29, 1994

Title:	Human IgM Antibodies, and Diagnostic and Therapeutic Uses Thereof Particularly in the Central Nervous System
Applicants:	Moses Rodriguez, David J. Miller, and Larry R. Pease
Serial Numbers:	10/010,729; 12/845,977; 13/800,117; 14/990,325; 15/629,123
Patent Numbers:	7,473,423 (granted January 6, 2009); 8,420,795 (granted April 16, 2013); 9,260,512 (granted February 16, 2016); 9,701,745 (granted July 11, 2017); 10,351,620 (granted July 16, 2019)
Filed with:	U.S. Patent and Trademark Office, November 13, 2001; July 29, 2010; March 13, 2013; January 7. 2016; June 21, 2017

Title:	Methods of Promoting Remyelination of Central Nervous System Axons by Administering sHIgM22
Applicants:	Moses Rodriguez, David J. Miller, and Larry R. Pease
Serial Number:	12/313,515
Patent Number:	7,807,166 (granted October 5, 2010)
Filed with:	U.S. Patent and Trademark Office, November 20, 2008

Title:	Human IgM antibodies with the capability of inducing remyelination, and diagnostic and therapeutic uses thereof particularly in the central nervous system
Applicants:	Moses Rodriguez, David J. Miller, and Larry R. Pease
Patent Number:	2287191 (granted March 7, 2011)
Filed with:	European Patent Office, March 30, 2000

Title:	Promotion of Central Nervous System Remyelination Using Monoclonal Autoantibodies
Applicants:	Moses Rodriguez, David J. Miller, and Kunihiko Asakura
Serial Number:	11/224,664
Patent Number:	Pending
Filed with:	U.S. Patent and Trademark Office, September 12, 2005

Title:	Arbovirus Inhibitors and Uses Thereof
Applicants:	Scott Larsen, Janice Sindac, Scott Barraza, and David J. Miller
Serial Number:	13/423,647
Patent Number:	8,846,684 (granted September 30, 2014)
Filed with:	U.S. Patent and Trademark Office, March 12, 2012

Bibliography

Peer-Reviewed Journals and Publications

1. Miller, D.J. and Hayes, C.E. Phenotypic and genetic characterization of a unique B lymphocyte deficiency in strain A/WySnJ mice. *Eur. J. Immunol.* 21:1123-1130, 1991.
2. Miller, D.J., Hanson, K.D., Carmen, J.A., and Hayes, C.E. A single autosomal gene defect severely limits IgG but not IgM responses in B lymphocyte-deficient A/WySnJ mice. *Eur. J. Immunol.* 22:373-379, 1992.
3. Miller, D.J., Sanborn, K., Katzmann, J.A., and Rodriguez, M. Monoclonal autoantibodies promote central nervous system repair in an animal model of multiple sclerosis. *J. Neurosci.* 14:6230-6238, 1994.
4. Miller, D.J. and Rodriguez, M. A monoclonal autoantibody that promotes central nervous system remyelination in a model of multiple sclerosis is a natural autoantibody encoded by germline immunoglobulin genes. *J. Immunol.* 154:2460-2469, 1995.
5. Asakura, K., Miller, D.J., Pogulis, R.J., Pease, L.R., and Rodriguez, M. Oligodendrocyte-specific O1, O4, and HNK-1 monoclonal antibodies are encoded by germline immunoglobulin genes. *Mol. Brain Res.* 34:283-293, 1995.
6. Miller, D.J., Rivera-Quinones, C., Njenga, M.K., Leibowitz, J., and Rodriguez, M. Spontaneous central nervous system remyelination in β_2 microglobulin-deficient mice after virus-induced demyelination. *J. Neurosci.* 15:8345-8352, 1995.
7. Miller, D.J., Njenga, M.K., Murray, P.D., Leibowitz, J., and Rodriguez, M. A monoclonal natural autoantibody that promotes remyelination suppresses central nervous system inflammation and increases virus expression after Theiler's virus-induced demyelination. *Int. Immunol.* 8:131-141, 1996.
8. Asakura, K., Miller, D.J., Murray, K., Pfeiffer, S.E., and Rodriguez, M. Monoclonal autoantibody SCH94.03, which promotes CNS remyelination, recognizes an antigen on the surface of oligodendrocytes. *J. Neurosci. Res.* 43:273-281, 1996.
9. Rodriguez, M., Miller, D.J., and Lennon, V.A. Immunoglobulins reactive with myelin basic protein promote CNS remyelination. *Neurology* 46:538-545, 1996.
10. Miller, D.J. and Rodriguez, M. Spontaneous central nervous system remyelination in strain A mice after infection with the Daniel's (DA) strain of Theiler's virus. *Acta Neuropathologica* 91:559-565, 1996.
11. Miller, D.J., Njenga, M.K., Parisi, J.E., and Rodriguez, M. Multi-organ reactivity of a monoclonal natural autoantibody that promotes remyelination in a mouse model of multiple sclerosis. *J. Histochem. Cytochem.* 44:1005-1011, 1996.
12. Miller, D.J., Bright, J.J., Sriram, S., and Rodriguez, M. Successful treatment of established chronic relapsing experimental autoimmune encephalomyelitis in mice with a monoclonal natural autoantibody. *J. Neuroimmunol.* 75:204-209, 1997.
13. Hunter, S.F., Miller, D.J., and Rodriguez, M. Monoclonal, remyelination-promoting, natural autoantibody SCH94.03: pharmacokinetics and in vivo binding sites in demyelinating spinal cord lesions in a mouse model of multiple sclerosis. *J. Neurol. Sci.* 150:103-113, 1997.
14. Asakura, K., Miller, D.J., Pease, L.R., and Rodriguez, M. Targeting of IgMκ antibodies to oligodendrocytes promotes central nervous system remyelination. *J. Neurosci.,* 18:7700-7708, 1998.
15. Nashold, F.E., Miller, D.J., and Hayes, C.E. 1,25-Dihydroxyvitamin D_3 treatment decreases macrophage accumulation in the CNS of mice with experimental autoimmune encephalomyelitis. *J. Neuroimmol.* 103:171-179, 2000.
16. Miller, D.J. and Mejicano, G.C. Vertebral osteomyelitis due to *Candida* species: case report and literature review. *Clin. Infect. Dis.*, 33:523-529, 2001.
17. Miller, D.J., Schwartz, M.D., and Ahlquist, P. Flock House virus RNA replicates on the outer mitochondrial membrane of *Drosophila* cells. *J. Virol.*, 75:11664-11676, 2001.
18. Miller, D.J. and Ahlquist, P. Flock House virus RNA polymerase is a transmembrane protein with amino-terminus sequences sufficient for mitochondrial localization and membrane insertion. *J. Virol.*, 76:9856-9867, 2002.
19. Miller, D.J., Schwartz, M.D., Dye, B.T., and Ahlquist, P. Engineered retargeting of viral RNA replication complexes to an alternative intracellular membrane. *J. Virol.*, 77:12193-12202, 2003.
20. Dye, B.T., Schell, K., Miller, D.J., and Ahlquist, P. Detecting protein-protein interactions in live yeast by flow cytometry. *Cytometry*, 63A:77-86, 2005.

21. Kampmueller, K.M. and Miller, D.J. The cellular chaperone heat shock protein 90 facilitates Flock House virus RNA replication in *Drosophila* cells. *J. Virol.*, 79:6827-6837, 2005. (Highlighted by editors as article of significant interest).
22. Dye, B.T., Miller, D.J., and Ahlquist, P. In vivo self-interaction of nodavirus RNA replicase protein A revealed by fluorescence resonance energy transfer. *J. Virol.* 79:8909-8919, 2005.
23. Kanneganti, T.D., Body-Malapel, M., Amer, A., Park, J.H., Whitfield, J., Franchi, L., Taraporewala, Z.F., Miller, D.J., Patton, J.T., Inohara, N., and Núñez, G. Critical role for cryopyrin/Nalp3 in activation of caspase-1 in response to viral infection and double-stranded RNA. *J. Biol. Chem.*, 2006 Dec 1; 281(48):36560-8. Epub 2006 Sep 28. PubMed PMID: 17008311.
24. Castorena, K.M., Weeks, S.A., Stapleford, K.A., Cadwallader, A.M., and Miller, D.J. A functional heat shock protein 90 chaperone is essential for efficient Flock House virus RNA polymerase synthesis in *Drosophila* cells. *J. Virol.*, 81:8412-8420, 2007. (Highlighted by editors as article of significant interest).
25. Kopek, B.G., Perkins, G., Miller, D.J., Ellisman, M.H., and Ahlquist, P. Three-dimensional analysis of a viral RNA replication complex reveals a virus-induced mini-organelle. *PLoS Biology*, 5:e220, 2007.
26. Castorena, K.M., Peltier, D.C., Peng, W., and Miller, D.J. Maturation-dependent responses of cultured human neuronal cells to western equine encephalitis virus infection and type I interferons. *Virology*, 372:208-220, 2008. PMID: 18022665.
27. Weeks, S.A. and Miller, D.J. The heat shock protein 70 co-chaperone *YDJ1* is required for membrane-specific Flock House virus RNA replication complex assembly and function in *Saccharomyces cerevisiae*. *J. Virol.*, 82:2007-2012. 2008. PMCID: PMC2920602.
28. Peng, W.*, Peltier, D.C.*, Larsen, M.J., Kirchhoff, P.D., Larsen, S.D., Neubig, R.R., and Miller, D.J. The identification of thieno [3,2-*b*]pyrrole derivatives as novel small molecule inhibitors of neurotropic alphaviruses. *J. Infect. Dis.*, 199:950-957, 2009. PMCID: PMC2788236 (*equal contribution)
29. Stapleford, K.A., Rapaport, D., and Miller, D.J. Mitochondrion-enriched anionic phospholipids facilitate Flock House virus RNA polymerase membrane association. *J. Virol.*, 83:4498-4507, 2009. PMCID: PMC2668453.
30. Wang, Q., Nagarkar, D.R., Bowman, E.R., Schneider, D., Gosangi, B., Lei, J., Zhao, Y., McHenry, C.L., Burgens, R.V., Miller, D.J., Sajjan, U., and Hershenson, M.B. Role of double-stranded RNA pattern recognition receptors in rhinovirus-induced airway epithelial cell responses. *J. Immunol.,* 183:6989-6997, 2009. PMCID: PMC2920602.
31. Weeks, S.A., Shield, W.P., Sahi, C., Craig, E.A., Rospert, S., and Miller, D.J. A targeted analysis of cellular chaperones reveals contrasting roles for heat shock protein 70 in Flock House virus RNA replication. *J. Virol.*, 84:330-339, 2010. (Highlighted by editors as article of significant interest). PMCID: PMC2798444.
32. Vaughn, V.M.*, Streeter, C.C.*, Miller, D.J., and Gerard, S.R. Restriction of Rift Valley fever virus virulence in mosquito cells. *Viruses*, 2:655-675, 2010. PMCID: PMC3185606. (*equal contribution)
33. Castorena, K.M.*, Stapleford, K.A.*, and Miller, D.J. Complementary transcriptomic, lipidomic, and targeted functional genetic analyses in cultured *Drosophila* cells highlight the role of glycerophospholipid metabolism in Flock House virus RNA replication. *BMC Genomics*, 11:183, 2010. PMCID: PMC2847973. (*equal contribution)
34. Peltier, D.C., Simms, A., Farmer, J.R., and Miller, D.J. Human neuronal cells possess functional cytoplasmic and Toll-like receptor-mediated innate immune pathways influenced by phosphatidylinositol-3 kinase signaling. *J. Immunol.*, 184:7010-7021, 2010. PMCID: PMC2887731.
35. Wang, Q, Miller, D.J., Bowman, E.R., Nagarkar, D.R., Schneider, D., Zhao, Y., Linn, M.J., Goldsmith, A.M., Bentley, J.K., Sajjan, U.S., Colonna, M., and Hershenson, M.B. MDA5 and TLR3 initiate pro-inflammatory signaling pathways leading to rhinovirus-induced airway inflammation and hyperresponsiveness. *PLoS Pathog*, 7(5):e1002070, 2011. PMCID: PMC3102730.
36. Sindac, J., Yestrepsky, B.D., Bolduc, K.L., Barraza, S.J., Bolduc, K.L, Blakely, P.K., Keep, R.F., Irani, D.N., Miller, D.J.*, and Larsen, S.D.* Novel inhibitors of neurotropic alphavirus replication that improve host survival in a mouse model of acute viral encephalitis. *J. Med. Chem.*, 55(7):3535-45, 2012 (*equal contribution, corresponding authors). PMCID:PMC3329717.
37. Peltier, D.C., Lazear, H.M., Farmer, J.R., Diamond, M.S., and Miller, D.J. Neurotropic arboviruses induce interferon regulatory factor 3-mediated neuronal responses that are cytoprotective, interferon-independent, and inhibited by western equine encephalitis virus capsid. *J. Virol.*, 87:1821-1833, 2013. PMCID:PMC3554193.

38. Farmer, J.R., Altschaefl, K.M., O'Shea, K.S., and Miller, D.J. Activation of the type I interferon pathway is enhanced in response to human neuronal differentiation. *PLoS One* 8(3):e58813, 2013. PMCID: PMC3591356.
39. Sindac, J.A., Barraza, S.J., Dobry, C.J., Xiang, J., Blakely, P.K., Irani, D.N., Keep, R.F., Miller, D.J.*, and Larsen, S.D.* Optimization of novel indole-2-carboxamide inhibitors of neurotropic alphavirus replication. *J. Med. Chem.*, 56:9222-9241, 2013 (*equal contribution, corresponding authors). PMCID:PMC3895407.
40. Raveh, A., Delekta, P.C., Dobry, C.J., Peng, W., Schultz, P.J., Blakely, P.K., Tai, A.W., Matainaho, T., Irani, D.N., Sherman, D.H., and Miller, D.J. Discovery of potent broad spectrum antivirals derived from marine Actinobacteria. *PLoS One*, 8(12):e82318, 2013. PMCID:PMC3857800.
41. Delekta, P.C., Dobry, C.J., Sindac, J.A., Barraza, S.J., Blakely, P.K., Xiang, J., Kirchhoff, P.D., Keep, R.F., Irani, D.N., Larsen, S.D., and Miller, D.J. Novel indole-2-carboxamide compounds are potent broad spectrum antivirals active against western equine encephalitis virus in vivo. *J. Virol.*, 88:11199-11214, 2014. PMCID:PMC4178776.
42. Blakely, P.K., Delekta, P.C., Miller, D.J., and Irani, D.N. Manipulation of host factors optimizes the pathogenesis of western equine encephalitis virus infections in mice for antiviral drug development. *J. Neurovirol.*, 21:43-55, 2015. PMCID:PMC4320042.
43. Barraza, S.J., Delekta, P.C., Sindac, J.A., Dobry, C.J., Xiang, J., Kirchhoff, P.D., Keep, R.F., Miller, D.J.*, and Larsen, S.D.* Discovery of anthranilamides as a novel class of inhibitors of neurotropic alphavirus replication. *Bioorg. Med. Chem.*, 23:1569-1587, 2015. (*equal contribution, corresponding authors). PMCID:PMC4363283.
44. Delekta, P.C., Raveh, A., Larsen, M.J., Sherman, D.H., and Miller, D.J. The combined use of alphavirus replicons and pseudoinfectious particles for the discovery of antivirals derived from natural products. *J. Biomolec. Screen.*, 20:673-680, 2015. PMCID:PMC4439314.
45. Davis, F., Miller, D.J., Newton, D., Arya, S., and Escobar, G.A. Successful treatment of multifocal thoracoabdominal aortic aneurysm as a late sequelae of intravesicular bacillus Calemete-Guerin treatment. Case report and literature review. *Ann. Vasc. Surg.*, 29:840.e9-13, 2015.
46. Barrtaza, S.J., Sindac J.A., Dobry, C.J., Delekta, P.C., Lee, P.H., Miller, D.J., and Larsen, S.D. Synthesis and biological activity of conformationally restricted indole-based inhibitors of neurotropic alphavirus replication: Generation of a three-dimensional pharmacophore. *Bioorg. Med. Chem. Lett.* 46:128171. PMCID:PMC8272561.

Non Peer-Reviewed Publications

1. Rodriguez, M. and Miller, D.J. Immune promotion of central nervous system remyelination. *Prog. Brain Res.* 103:343-355, 1994.
2. van Engelen, B.G.M., Miller, D.J., Pavelko, K.D., Holmes, O.R., and Rodriguez, M. Promotion of remyelination by polyclonal immunoglobulin in Theiler's virus-induced demyelination and in MS. *J. Neurol. Neurosurg. Psych.* 57(Supplement):65-68, 1994.
3. Miller, D.J., Asakura, K., and Rodriguez, M. Experimental strategies to promote central nervous system remyelination in multiple sclerosis. Insights gained from the Theiler's virus model system. *J. Neurosci. Res.* 41:291-296, 1995.
4. Miller, D.J. and Rodriguez, M. Spontaneous and induced remyelination in multiple sclerosis and the Theiler's virus model of central nervous system demyelination. *Microscopy Res. Technique* 32:230-245, 1995.
5. Miller, D.J., Asakura, K., and Rodriguez, M. Central nervous system remyelination: clinical application of basic neuroscience principles. *Brain Pathology* 6:331-344, 1996.
6. Hunter, S.F., Asakura, K., Miller, D.J., and Rodriguez, M. The repair of central nervous system myelin. Cell biology and pharmacologic action of remyelination-promoting autoantibodies. In *Cell Biology and Pathology of Myelin*, ed. Juurlink et al., Plenum Press, New York, pp. 253-264, 1997.
7. Miller, D.J. Diagnosis and management of *Candida* and other fungal infections in the head and neck. *Curr. Infect. Dis. Reports*, 4:194-200, 2002.
8. Stapleford, K.A. and Miller, D.J. Role of cellular lipids in positive-sense RNA virus replication complex assembly and function. *Viruses*, 2:1055-1068, 2010.
9. Delekta, P.C., Raveh, A., Sherman, D.H., and Miller, D.J. Discovery of alphavirus inhibitors derived from natural products. *Curr Topics Virology*, 11:1-17, 2013.