

BIOGRAPHICAL SKETCH

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NAME: John R. Corboy, M.D.

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Professor of Neurology, University of Colorado

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Pennsylvania, Philadelphia, PA	B.A.	1976	Anthropology
University of California at Los Angeles, CA	M.A.	1978	Anthropology
University of Pennsylvania, Philadelphia, PA	M.D.	1985	Medicine
University of Pennsylvania, Philadelphia, PA	Residency	1989	Medicine, Neurology
Johns Hopkins University, Baltimore, MD	Fellow	1989-92	Neurovirology

A. Personal Statement

I have a long-time interest and extensive experience in the care and clinical research of multiple sclerosis patients. In 1997, I founded the University of Colorado Multiple Sclerosis Center, which transformed in 2008 into the Rocky Mountain Multiple Sclerosis Center at University of Colorado, of which I am Co-Director. We see, as a group, ~8000 MS patient visits per year, and our group is involved in between 15-40 clinical research projects at any one time. We have a significant interest in enhancing the treatment of major symptoms of MS, economic aspects of MS care, the role of brain atrophy in MS, clinical trials looking at development and comparison of disease modifying therapies (DMTs), and when to consider a trial discontinuation of DMTs..

B. Positions and Honors**Research and/or Professional Experience**

1992-1994 Assistant Professor of Neurology, University of Minnesota, Minneapolis, MN
 1994-2000 Assistant Professor, Department of Neurology, UCHSC, Denver, CO
 1995-2000 Residency Director, Department of Neurology, UCHSC, Denver, CO
 2000-2002 Vice Chairman, Department of Neurology, UCHSC, Denver, CO
 2000-2006 Associate Professor, Department of Neurology, UCHSC, Denver, CO
 2006-present Professor, Department of Neurology, UC Anschutz Medical Campus, Aurora, CO
 2015-present Vice Chair for Faculty Affairs, Dept of Neurology, University of Colorado
 2009-present Director, Rocky Mountain MS Center Tissue Bank
 2010-present Founding Editor, *Neurology Clinical Practice*
 2017-present Vice Chair for Clinical Affairs, Dept of Neurology, University of Colorado

Honors

1985 Alpha Omega Alpha Honor Society
 1985 Alpers Clinical Neurology ward, University of Pennsylvania School of Medicine
 1987 Dinon Teaching Award, Hospital of University of Pennsylvania
 1997 National Multiple Sclerosis Society, Corporate Achievers Award
 2000 National Multiple Sclerosis Society, Denver Chapter, Programs Volunteer of the Year
 2003 National Multiple Sclerosis Society, Denver Chapter, Healthcare Provider of the Year
 2006 Denver Health Medical Center, Volunteer Physician of the Year
 2007-2010 Best Doctors in America
 2013-16 Best Doctors in America

Public Advisory Committees

- 1991-1993 NIH Virology Section Review, Ad Hoc Member
1997 - 2009 American Academy of Neurology (AAN), A.B. Baker Committee on Education and Subcommittee on Graduate Education; Chair, 2003-09
1999 - 2001 Lupus Foundation of Colorado, Inc., Health Advisory Board, Neurology Advisor
2005 - present National Multiple Sclerosis Society, Colorado Chapter, Board Member
2005 - 2011 National Multiple Sclerosis Society, National Chapter, Professional Education Committee
2010 - 2016 AAN Meeting Management Committee

Societies

- 1989-1995 American Association for the Advancement of Science
1987-present American Academy of Neurology, Fellow 2003
1993-1995 American Society for Microbiology
1994-present Colorado Society of Clinical Neurologists, 1995-1997 Secretary/Treasurer
2005-present American Neurological Association (elected)

C. Selected peer-reviewed recent publications

1. Nair KV, **Corboy J**, Kahler K, Allen R, et al. Use of diagnostic tests and procedures for disease-modifying therapy users and non-disease-modifying therapy users with multiple sclerosis. *Expert Rev. Neurother*, 2011; 11(6): 787–798.
2. Schowinsky J, **Corboy J**, Vollmer T, Kleinschmidt-Demasters BK. Natalizumab-associated complication? First case of peripheral T cell lymphoma. *Acta Neuropathol*. 2012 May;123(5):751-2. Epub 2012 Mar 11.
3. Kleinschmidt-Demasters BK, Miravalle A, Schowinsky J, **Corboy J**, Vollmer T. [Update on PML and PML-IRIS Occurring in Multiple Sclerosis Patients Treated With Natalizumab](#). *J Neuropathol Exp Neurol*. 2012 Jul;71(7):604-17.
4. Campbell JD, McQueen RB, Miravalle A, **Corboy J**, Vollmer T, Nair K. Comparative effectiveness of early natalizumab treatment in JC virus negative relapsing-remitting multiple sclerosis. *American Journal of Managed Care*, 2013; 19(4): 278-285.
5. Hebert JR, **Corboy JR**. The association between multiple sclerosis-related fatigue and balance as a function of central sensory integration. *Gait Posture*. 2013 May;38(1):37-42. doi: 10.1016/j.gaitpost.2012.10.015. Epub 2012 Nov 28.
6. Campbell, JD, Ghushchyan V, McQueen RB, Cahon-Metzger S, Livingston T, Vollmer T, **Corboy J**, Miravalle A, Schreiner T, Porter V, Nair K. Burden of multiple sclerosis on direct, indirect costs and quality of life: National US estimates. *Multiple Sclerosis*, accepted 2013
7. Lafosse JM, Mitchell SM, **Corboy JR**, Filley CM. The nature of verbal memory impairment in multiple sclerosis: a list-learning and meta-analytic study. [J Int Neuropsychol Soc](#). 2013 Oct;19(9):995-1008. doi: 10.1017/S1355617713000957
8. Waid DM, Schreiner T, Vaitaitis G, Carter JR, **Corboy JR**, Wagner DH Jr. Defining a new biomarker for the autoimmune component of Multiple Sclerosis: Th40 cells. [J Neuroimmunol](#). 2014 Mar 15. pii: S0165-5728(14)00073-3. doi: 10.1016/j.jneuroim.2014.03.009. [Epub ahead of print]
9. Lublin FD, Bowen JD, Huddlestone J, Kremenutzky M, Carpenter A, **Corboy JR**, Freedman MS, Krupp L, Paulo C, Hariri RJ, Fischkoff SA. [Human placenta-derived cells \(PDA-001\) for the treatment of adults with multiple sclerosis: a randomized, placebo-controlled, multiple-dose study](#). *Mult Scler Relat Disord*. 2014 Nov;3(6):696-704. doi: 10.1016/j.msard.2014.08.002. Epub 2014 Aug 29.
10. Kister I, **Corboy JR**. [Reducing costs while enhancing quality of care in MS](#). *Neurology*. 2016 Sep 2. pii: 10.1212/WNL.0000000000003113. [Epub ahead of print] PMID:27590294
11. Solomon AJ, Klein EP, **Corboy JR**, Bernat JL. Patient Perspectives on Physician Conflict of Interest in Industry-Sponsored Clinical Trials for Multiple Sclerosis Therapeutics. [Mult Scler](#). 2015 Feb 25. pii: 1352458515569101. [Epub ahead of print].
12. Voskuhl RR, Wang H, Wu TC, Sicotte NL, Nakamura K, Kurth F, Itoh N, Bardens J, Bernard JT, **Corboy JR**, Cross AH, Dhib-Jalbut S, Ford CC, Frohman EM, Giesser B, Jacobs D, Kasper LH, Lynch S, Parry G, Racke MK, Reder AT, Rose J, Wingerchuk DM, MacKenzie-Graham AJ, Arnold DL, Tseng CH, Elashoff R. Estriol combined with glatiramer acetate for women with relapsing-remitting multiple sclerosis: a randomised, placebo-controlled, phase 2 trial. *Lancet Neurol*. 2016 Jan;15(1):35-46. doi: 10.1016/S1474-4422(15)00322-1. Epub 2015 Nov 29. PMID:26621682

13. Govindarajan KA, Datta S, Hasan KM, Choi S, Rahbar MH, Cofield SS, Cutter GR, Lublin FD, Wolinsky JS, Narayana PA; MRI Analysis Center at Houston, The CombiRx Investigators Group. Effect of in-painting on cortical thickness measurements in multiple sclerosis: A large cohort study. *Hum Brain Mapp.* 2015 Oct;36(10):3749-60. doi: 10.1002/hbm.22875. Epub 2015 Jun 19. PMID:26096844
14. Dilokthornsakul P, Valuck RJ, Nair KV, **Corboy JR**, Allen R, and Campbell JD. Multiple Sclerosis Prevalence in the United States Commercially Insured Population. *Neurology.* 2016 Mar 15;86(11):1014-21. doi: 10.1212/WNL.0000000000002469. Epub 2016 Feb 17.
15. Blakeley JO, Coons SJ, **Corboy JR**, Kline Leidy N, Mendoza TR, Wefel JS. Clinical outcome assessment in malignant glioma trials: measuring signs, symptoms, and functional limitations. *Neurology.* 2016 Mar 15;86(11):1014-21. doi: 10.1212/WNL.0000000000002469. Epub 2016 Feb 17.
16. Klein E, Solomon AJ, **Corboy J**, Bernat J. Physician compensation for industry-sponsored clinical trials in multiple sclerosis influences patient trust. *Mult Scler Relat Disord.* 2016 Jul;8:4-8. doi: 10.1016/j.msard.2016.04.001. Epub 2016 Apr 11
17. **Corboy JR**. Disease-modifying therapies can be safely discontinued in an individual with stable relapsing-remitting MS - Commentary. *Mult Scler.* 2017 Jun 1:1352458517717809. doi: 10.1177/1352458517717809. [Epub ahead of print] No abstract available. PMID: 28673113
18. Hardy TA, **Corboy JR**, Weinschenker BG. Baló concentric sclerosis evolving from apparent tumefactive demyelination. *Neurology.* 2017 May 30;88(22):2150-2152. doi: 10.1212/WNL.0000000000003990. Epub 2017 May 3. No abstract available. PMID: 28468846
19. Vollmer B, Nair KV, Sillau SH, **Corboy J**, Vollmer T, Alvarez E. Comparison of fingolimod and dimethyl fumarate in the treatment of multiple sclerosis: Two-year experience. *Mult Scler J Exp Transl Clin.* 2017 Aug 17;3(3):2055217317725102. doi: 10.1177/2055217317725102. eCollection 2017 Jul-Sep. PMID: 28839949
20. Solomon AJ, **Corboy JR**. The tension between early diagnosis and misdiagnosis of multiple sclerosis. *Nat Rev Neurol.* 2017 Sep;13(9):567-572. doi: 10.1038/nrneuro.2017.106. Epub 2017 Aug 11. Review. No abstract available. PMID: 28799551

D. Research Support

Ongoing

Med Day Corboy (PI) 2017-2020
 Protocol Title: High Dose Biotin in Progressive MS
 Budget pending
 Effort: 2% of University time

PCORI Corboy (Site and Overall PI) 2016-2020
 Protocol Title: Discontinuation of Disease Modifying Therapies in MS (DISCOMS). A randomized discontinuation trial in stable MS patients 55 and older, taking disease modifying therapies for at least the last five years.
 \$6.7 million total costs at 13 sites
 Effort 30% of University time

National MS Society Corboy (PI) 2009- (ongoing)
 Protocol Title: Rocky Mountain MS Center Tissue Bank
 \$29,470 annual salary; approximately \$200,000 annual costs
 Effort: 15% of University time

Novartis Corboy (PI) 2014--2017
 A 12-month, randomized, rater- and dose-blinded study to compare the efficacy and safety of fingolimod 0.25 mg and 0.5 mg administered orally once daily with glatiramer acetate 20 mg administered subcutaneously once daily in patients with relapsing-remitting multiple sclerosis
 \$2,696 annual salary; \$381,539 total costs
 Effort: 2%

Novartis Corboy (PI) 2014-2017

A multicenter, randomized, double-blind, parallel-group, placebo-controlled variable treatment duration study evaluating the efficacy and safety of Siponimod (BAF312) in patients with secondary progressive multiple sclerosis

\$2,696 annual salary; \$621,360 total costs

Effort: 2%

Provatet Source Corboy (PI) 2014-2017

A double-blind, placebo controlled trial of estriol treatment in women with multiple sclerosis: effect on cognition.

\$2,696 annual salary; \$98,635 total costs

Effort: 2%

Prior Support, recent

Novartis CFTY720D2306 Corboy (PI) 2010-2014

Project Title: A double-blind, randomized, multicenter, placebo-controlled, parallel-group study comparing the efficacy and safety of 0.5 mg FTY720 administered orally once daily versus placebo in patients with primary progressive multiple sclerosis

Effort: 5%

NINDS Corboy (PI) 2009-2013

Protocol Title: A Combination Trial of Copaxone plus Estriol in RRMS

\$13,489 annual salary; \$230,334 total costs

Effort: 10%

Biogen ACT, Avonex Combination Trial Corboy (PI) 2004-2007

A Multi-Center, Randomized, Blinded, Parallel-Group Study of Avonex® Compared with Avonex® in Combination with Oral Methotrexate, Intravenous Methylprednisolone, or Both in Subjects with Relapsing-Remitting Multiple Sclerosis Who Have Breakthrough Disease on Avonex® Monotherapy.

\$130,000 for 10 patients.

Effort: 5%

OLYMPUS Genentech Corboy (PI) 2005-2007

A Phase III, randomized, double-blind, placebo-controlled, multicenter study to evaluate the safety and efficacy of Rituximab in adults with primary progressive multiple sclerosis. (U2786g Rituximab in Multiple Sclerosis).

\$258,059 direct costs, total \$300,208 for 10 pts

Effort: 5%

BIO-MS/Lilly MBP8298-SP-03 Corboy (PI) 2007-2010

A Double-blind, Placebo Controlled Multi-center Study to Evaluate the Efficacy and Safety of MBP8298 in Subjects with Secondary Progressive Multiple Sclerosis

Effort: 5%

National MS Society Pilot Grant PP1501 Corboy (Co-I) 2008-2010

The effects of vestibular rehabilitation on MS-related fatigue: randomized control trial.

RCT that examines the benefits of vestibular exercise for people with MS.

Effort: 5%

Novartis CFTY720D2309 Corby (PI) 2007-2011

Project Title: A 24-month double-blind, randomized, multicenter, placebo-controlled, parallel-group study comparing the efficacy and safety of 0.5 mg and 1.25 mg fingolimod (FTY720) administered orally once daily versus placebo in patients with relapsing-remitting multiple sclerosis.

\$1,562,816 direct and indirect costs

Effort: 5%

NIH CombiRx- Phase III Corboy (PI) 2005-2011

Protocol Title: A Multi-Center, Double-Blind, Randomized Study Comparing the Combined Use of Interferon Beta-1a and Glatiramer Acetate to Either Agent Alone in Patients with Relapsing Remitting Multiple Sclerosis

\$208,445 for 15 patients

Effort: 5%

Lilly-H9B-MC-BCDJ Corboy (PI) 2010-2013

Project Title: Multiple Subcutaneous Doses of LY2127399, an Anti-BAFF Human Antibody, in Subjects with Relapsing Remitting Multiple Sclerosis

Effort: 5%

Celgene Therapeutics Corboy (PI) 2011-2013

Project title: A Phase IB, Randomized, Placebo Controlled, Multiple Dose Study to Evaluate the Safety of Intravenous Infusion of Cell Therapy (XXX) for the Treatment of Adults with Multiple Sclerosis

Effort: 5%

IT035A1 Immune Tolerance Network/NIAID Corboy (PI) 2011-2013

Project Title: A Phase II, Randomized, Double-blind, Parallel-group, Placebo-controlled, Multicenter Study to Evaluate the Safety and Efficacy of Abatacept in Adults with Relapsing-remitting Multiple Sclerosis

Effort: 5%