

CURRICULUM VITAE

John F. Foley, M.D.

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Salt Lake City, UT 84103
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Education/Training:

1976 - 1979 University of Wisconsin - Milwaukee
Bachelor of Science degree
Milwaukee, Wisconsin USA

1979 - 1983 Medical College of Wisconsin
Doctor of Medicine degree
Milwaukee, Wisconsin USA

1983 - 1984 University of Utah Medical Center
Intern, Internal Medicine
Salt Lake City, Utah USA

1984 - 1987 University of Utah Medical Center
Resident, Neurology
Salt Lake City, Utah USA

2009 Collaborative Institutional Training Initiative (CITI)
Biomedical Research Investigators and Key Personnel

Academic Appointments:

1986 - 1987 Chief Resident, Neurology
University of Utah Medical Center

1986 - 1988 Instructor, Nervous Organ System Course
University of Utah School of Medicine

1989 - 1998 Clinical Instructor, Department of Neurology
University of Utah School of Medicine

1993 - 2000 Director, Graduate Medical Education Program in Neurology
LDS Hospital

Practice:

1987 - 1988 Loveland Neurosciences, P.C.
1988 - 1990 Salt Lake Clinic, Neurology Department
1990 - present Rocky Mountain Neurological Associates
2006 - present Rocky Mountain Multiple Sclerosis Clinic
2011- present Rocky Mountain MS Research Group LLC

Administrative:

1992 - present LDS Hospital: Chief, Division of Neurology
2006 - present Rocky Mountain Multiple Sclerosis Clinic: Director
2009 - 2010 LDS Hospital: President-Elect, Medical Staff
2010 – 2011 LDS Hospital: President, Medical Staff
2010 – present Rocky Mountain MS Research Group, LLC: President
2010 – present Neocortical Dynamics LLC: President
2012 – present LDS Hospital: President Emeritus

Board Certification:

American Board of Medical Examiners (May 1984)
American Board of Psychiatry and Neurology (June 1989)
American Board of Electrodiagnostic Medicine (May 1992)

Licensure:

Utah (84-171994-1205)

Societies:

American Academy of Neurology
American Association of Electrodiagnostic Medicine
Consortium of Multiple Sclerosis Centers

Board of Directors:

National Multiple Sclerosis Society: Utah Chapter

Board of Trustees:

**Intermountain Healthcare Urban Central Region-January 2009
to January 2012**

Poster Presentations:

Foley JF, Matsuo F: Periodic lateralized epileptiform discharges associated with cerebral watershed ischemia. American Electroencephalographic Society Annual Meeting, Kissimee, Florida. October 12, 1985.

Foley JF, Osborn AG, Harnsberger HR, Townsend JD, Coit WF: Childhood primary brain tumors in adults: CT/MR spectrum. American Society of Neuroradiology Annual Meeting, San Diego, California. January 19, 1986.

Matsuo F, Foley JF, Gaskin JS: Detailed scalp topography of the electrooculogram. Presented at the Western Society of Electroencephalographers, Palm Springs, California. February 26, 1986.

Foley JF: Natalizumab discontinuation predisposes to serious infusion related reactions and antibody formation. Americas Committee for Treatment and Research in Multiple Sclerosis Annual Meeting (ACTRIMS): Emerging Therapies in Multiple Sclerosis. June 2, 2007.

Menning K, Roy M, Foley JF: A management method for natalizumab administration. Consortium of Multiple Sclerosis Centers Annual Meeting, May 31, 2007.

Foley JF: The Efficacy of Natalizumab in Patients with Relapsing Multiple Sclerosis in a Clinical Practice Setting: 61st Annual Meeting of the American Academy of Neurology, Seattle, Washington. April 29, 2009.

Foley JF: CD 4 dynamics in a natalizumab treated population. European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS). Göteborg, Sweden, October 2010.

Foley JF: Soluble Vascular Cell Adhesion Molecule (sVCAM) Levels and Herpes Zoster as Surrogate *In Vivo* Markers for Cell-Mediated Antiviral Immune

Activity in a Natalizumab-Treated Population. American Academy of Neurology, Honolulu, Hawaii, April 2011.

Khatri B, Foley J, Fink J, Kramer J, You X, Warth JD, Cha C: Effects of TYSABRI on bladder function: interim results of the TRUST study. American Academy of Neurology, Honolulu, Hawaii, April 2011.

Costello K, Foley J, Brewster C: Implementation of a Web-Based Patient-Reported Outcomes Research Program. American Academy of Neurology, Honolulu, Hawaii, April 2011.

Gold R, Foley J, Vermersch P, Kappos L, Olsson T, Cadavid D, Bozic C, Richman S: Overview of Clinical Outcomes in Cases of Natalizumab-Associated Progressive Multifocal Leukoencephalopathy. American Academy of Neurology, Honolulu, Hawaii, April 2011.

Foley J: Progressive Escalation of Natalizumab Serum Concentration as a Potential Kinetic Marker for PML Risk Assessment. American Academy of Neurology, Honolulu, Hawaii, April 2011.

Frost RB, Larson MJ, Foley JF, Hopkins MO: EEG Peak Alpha Frequency and Cognitive Performance in Patients with Multiple Sclerosis. ECTRIMS, Amsterdam, October 2011.

Khatri B, Foley J, Fink J, Kramer X, You J, Warth J, Cha C: TRUST study results: effects of natalizumab on bladder function. ECTRIMS, Amsterdam, October 2011.

Foley J, Christensen A, Anderson T: Natalizumab Kinetics and Dose Extension: Defining the Therapeutic Envelope. American Academy of Neurology, New Orleans, Louisiana, April 2012.

Platform Presentations:

Vermersch P, Kappos L, Gold R, Foley J, Olsson T, Bozic C, Richman S: Overview of clinical outcomes in cases of natalizumab-associated progressive multifocal leukoencephalopathy. European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS). Göteborg, Sweden, October 2010.

Foley JF: Progressive Escalation of Natalizumab Serum Concentration as a Potential Kinetic marker for PML Risk Assessment. American Academy of Neurology, Honolulu, Hawaii, April 2011.

Vermersch P, Kappos L, Gold R, Foley J, Olsson T, Bozic C, Richman S: Overview of clinical outcomes in cases of natalizumab-associated progressive multifocal leukoencephalopathy. American Academy of Neurology, Honolulu, Hawaii, April 2011.

Bibliography:

- 1. Matsuo F, Foley JF, Gaskin JA. Topographic localization in generation of the electrooculogram (EOG). *Electroencephalogr Clin Neurophysiol* 1986; 64; 81P**
- 2. Foley JF, Matsuo F. Periodic lateralized epileptiform discharges associated with cerebral watershed ischemia. *Electroencephalogr Clin Neurophysiol* 1986; 64: 20P**
- 3. Matsuo F, Foley JF, Gaskin JA. Detailed scalp topography of electrooculogram. *Electroencephalogr Clin Neurophysiol* 1987; 66: 2P**
- 4. Rose JW, Foley J, Steffens J, et al. Magnetic resonance spectroscopy of normal-appearing white matter in patients with clinically suspected multiple sclerosis. *Ann Neurol*. 2000; 48: 478. Abstract 234**
- 5. Parkinson RB, Hopkins RO, Cleavinger HB, Weaver LK, Victoroff J, Foley RJ, Bigler ED. White matter hyperintensities and neuropsychological outcome following carbon monoxide poisoning. *Neurol*. 2002; 58: 1525**
- 6. Hopkins ROS, Fearing MA, Weaver LK, Foley JF. Basal ganglia lesions following carbon monoxide poisoning. *Brain Inj*. 2006 Mar; 20(3):273-81**
- 7. Menning K, Roy M, Foley JF. A management method for natalizumab administration. *International Journal of MS Care*. 2007; 9:90. Abstract**
- 8. Rose JW, Foley J, Carlson N. Monoclonal antibody treatments for multiple sclerosis. *Curr Neurol Neurosci Rep*. 2008 Sep. 8(5):419-26**
- 9. Rose JW, Foley J, Carlson N. Monoclonal antibody treatments for multiple sclerosis. *Current Treatment Options in Neurology* 2009, 11:211–220**
- 10. Foley JF, Brandes DW. Redefining Functionality and Treatment Efficacy in Multiple Sclerosis. *Neurology*, 2009; 72 (Suppl 5): S1-S11**

11. Coyle PK, Foley JF, Fox E, et al. Best practice recommendations for the selection and management of patients with multiple sclerosis receiving natalizumab therapy. *Multiple Sclerosis Journal*, 2009 Nov. 15(Suppl 4): S26-S36
12. Foley JF, Dunne AM. Considerations for the Successful Management of a Neurology Infusion Practice. *International Journal of MS Care*, 2011; 13:95–104
13. Foley JF, Recommendations for the Selection, Treatment, and Management of Patients Utilizing Natalizumab Therapy for Multiple Sclerosis. *American Journal of Managed Care*, 2010; 16(No. 6): S19-S24
14. Foley JF, The Epidemiology of Progressive Multifocal Leukoencephalopathy. *Clinical Review of JCV and PML, Supplement to Neurological Reviews*: July 2011: S10-S16
15. Foley JF, Emerging Data in Treatment-Associated PML. *Clinical Review of JCV and PML, Supplement to Neurological Reviews*: December 2011: S15-S19
16. Frost RB, Larson MJ, Foley JF, Hopkins RO. (2011). EEG peak alpha frequency and cognitive performance in patients with multiple sclerosis. *Multiple Sclerosis Journal*, 17(10 Supplement), pg. S91. DOI: 10.1177/1352458511422300.

Invited Presentations:

Migraine Management. McKay-Dee Hospital, Ogden, Utah. February 18, 1998. Grand Rounds.

MS Update, Q&A Session. MS Society, Salt Lake City, Utah. May 7, 1998. Newly diagnosed MS patients.

MS Update, Q&A Session. MS Society, Salt Lake City, Utah. June 6, 1998. Patient Update.

Diagnosing Migraine and Its Management Strategies. Bozeman Deaconess Hospital, Bozeman, Montana. February 19, 1999. Grand Rounds.

Diagnosis & Therapeutics in Neurological Auto-Immune Disease. Castleview Hospital, Price, Utah. June 18, 1999. Castle Country Medical Symposium.

Update in MS. Utah Academy of Family Physicians, Moab, Utah. May 15, 1999. Semi-annual Meeting.

Migraine Management. LDS Hospital CME, Salt Lake City, Utah. November 6, 1999. Medicine in the Intermountain West Update 1999.

Migraine Headaches. Update on Multiple Sclerosis. Montana Academy of Family Physicians, Whitefish, Montana. January 26-27, 2000. Big Mountain Medical Ski Conference.

Initial Evaluation and Ongoing Management of Multiple Sclerosis. Utah Academy of Family Physicians, Park City, Utah. February 10, 2000. Semi-annual Meeting.

Challenging Therapeutics: Later Stage MS from Remitting Relapsing to Secondary Progressive. Biogen, Las Vegas, Nevada. February 19, 2000. Regional Update in MS for the Practicing Neurologist.

MS Update: Diagnosis & Referral Criteria, New Treatments. Dixie Regional Medical Center, St. George, Utah. February 25, 2000. Dixie Spring Symposium.

Therapeutics in Neurological Auto-Immune Disease. Utah Academy of Family Physicians, Moab, Utah. May 6, 2000. Semi-annual Meeting.

Multiple Sclerosis Update. Utah Osteopathic Medical Association, Midway, Utah. September 27, 2000. Harvest Symposium CME Conference.

Update on Neurology for Primary Care Practitioners & Specialists: Emphasis on the Multiple Uses of Anticonvulsant Drugs. Asante/Providence CME of Southern Oregon, Medford, Oregon. April 13, 2001.

Neuroinflammation Symposium: The Early Utah Natalizumab Experience. University of Utah, Salt Lake City, Utah. November 14, 2006.

Benefits & Challenges: Patient-reported Outcome Measures in Multiple Sclerosis Clinical Practice. The Consortium of Multiple Sclerosis Centers 24th Annual Conference. San Antonio, Texas. June 4, 2010.

Course Director:

IHC Neurological Update for Primary Care Physicians. LDS Hospital Continuing Medical Education, Deer Valley, Utah. October 15, 1999.

**Current Trends in Neurological Therapeutics for the Practicing Neurologist.
Challenging Therapeutics: Later Stage MS from Remitting Relapsing to
Secondary Progressive. LDS Hospital, Continuing Medical Education, Park
City, Utah. August 12, 2000.**

Clinical Pharmacology Research

Principal Investigator “A Double-Blind, Randomized, Placebo-Controlled, Multicenter Study to Determine the Effectiveness and Safety of Dihydroergotamine Mesylate Nasal Spray 2 mg for the Acute Treatment of Migraine Headache With or Without Aura in Migraineur Families” DHE-454 sponsored by Sandoz Pharmaceuticals/Clintrials Research. January 1995 - December 1995.

Principal Investigator “Lubeluzole: Effects of Intravenous Therapy in Subjects with Acute Ischemic Stroke” LUB-INT-9 sponsored by Janssen Pharmaceutica, Inc. February 1995 -February 1996.

Principal Investigator “Long-term, Open Label Study to Evaluate the Safety of Copolymer 1 and to Extend its Availability to Patients with Relapsing-Remitting Multiple Sclerosis” COP-1 sponsored by Teva Pharmaceutical Industries, Ltd/Lemmon Co. January 1995 - August 1997.

Principal Investigator “U.S. Migraine Assessment (USMAP) Protocol to Examine Treatment Effectiveness and Satisfaction in Migraine Patients Associated with Use of Rizatriptan (Maxalt) over 2 Migraine Attacks” sponsored by Merck & Co., Inc. June 1998 – June 2000.

Principal Investigator “Open Label, Randomized, Crossover Trial to Quantify the Ease of Use, Tolerability and Safety of the Copaxone Autoject Device in Subjects Who Alternate Between Self-Injection of Copaxone with the Manual Injection Method and with the Aid of the Autoject Device” sponsored by Teva Marion Partners. February 2001 - 2002.

Principal Investigator “A Randomized, Double-Blind, Placebo-Controlled, Dose-Ranging Study to Determine the Safety and Efficacy of AVONEX When Used in Subjects with Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP)” C-870 sponsored by Biogen Idec. July 2003-2004.

Principal Investigator “TYSABRI Global Observational Program in Safety (TYGRIS)” 101MS402 sponsored by Biogen Idec. May 2007-ongoing.

Principal Investigator “A Randomized, Multi-center, Placebo-Controlled and Active Reference (Glatiramer Acetate) Comparison Study to Evaluate the Efficacy and Safety of BG00012 in Subjects with relapsing-Remitting Multiple Sclerosis” 109MS302 sponsored by Biogen IDEC, Inc. June 2007 - January 2011.

Principal Investigator “Multi-center, Open-label Study to Evaluate the Effects of Natalizumab Treatment on Fatigue and Cognition in Subjects with Relapsing Forms of MS” 001-06-NAT sponsored by Biogen IDEC, Inc. January 2008 - November 2009.

Principal Investigator “An Assessment of the Steady-State Pharmacokinetic and Pharmacodynamic Profile of Tysabri 300 mg Following at least 12 Monthly Infusions” 101MS406 sponsored by Biogen IDEC, Inc. July 2008 - February 2009.

Principal Investigator “An Open-Label, Multicenter Study to Determine Subject Satisfaction in Using the Single-Use Autoinjector with a Pre-filled Liquid Avonex Syringe in Multiple Sclerosis Subjects” 108MS302 sponsored by Biogen IDEC, Inc. December 2008 - March 2009.

Principal Investigator “Evaluation of Bladder Function in Relapsing Remitting Multiple Patients Treated with Natalizumab” US 006-08-NAT sponsored by Biogen IDEC, Inc. January 2009 - September 2010.

Principal Investigator “A Dose-Blind, Multicenter, Extension Study to Determine the Long-term Safety and Efficacy of Two Doses of BG00012 Monotherapy in Subjects with Relapsing-Remitting Multiple Sclerosis” 109MS303 sponsored by Biogen IDEC, Inc. June 2009 - November 2011.

Principal Investigator “A Multicenter, Randomized, Double-Blind, Parallel-Group, Placebo-Controlled Study to Evaluate the Efficacy and Safety of PEGylated Interferon Beta 1a (BIIB017) in Subjects with Relapsing Multiple Sclerosis” 105MS301 sponsored by Biogen IDEC, Inc. July 2009 - October 2010.

Principal Investigator “An Open-Label, Multicenter Study to Evaluate the Safe and Effective Use of the Single-Use Autoinjector with an AVONEX Prefilled Syringe in Multiple Sclerosis Subjects” 108MS302 sponsored by Biogen IDEC, Inc. February 2010 - November 2010.

Sponsor-Principal Investigator “Pharmacokinetic, immunological, and biochemical sample collection and analysis in a natalizumab treated patient cohort” 001-001-TY. March 2010 - September 2010.

Principal Investigator “Randomized Treatment Interruption of Natalizumab” 101MS205 sponsored by Biogen IDEC, Inc. February 2010- December 2011.

Principal Investigator “JCV Antibody Program in Patients with Relapsing Multiple Sclerosis Receiving or Considering Treatment with Tysabri: Stratify 1” 101JC401 sponsored by Biogen IDEC, Inc. March 2010-ongoing.

Principal Investigator “JCV Antibody Program in Patients with Relapsing Multiple Sclerosis Receiving or Considering Treatment with Tysabri: Stratify 2” 101JC402 sponsored by Biogen IDEC, Inc. July 2010-ongoing.

Principal Investigator “A Multicenter, Randomized, Rater-Blind, Parallel-Group, Active Controlled Study to Evaluate the Benefits of Switching Therapy (Glatiramer Acetate or Interferon β 1a) to Natalizumab in Subjects with Relapsing remitting Multiple Sclerosis” 101MS325 sponsored by Biogen IDEC, Inc. December 2010 - March 2011.

Principal Investigator “Effectiveness, Safety and Patient Outcomes of Fingolimod Relapsing remitting MS” CFTY720DUS01 EPOC sponsored by Novartis. December 2010 - ongoing.

Sub-Investigator, “A Phase 1b, Dose-Escalating, Randomized, Placebo-Controlled, Double-Blind Study to Evaluate the Safety and Efficacy of Subcutaneous ELND002 in Patients with Relapsing Forms of Multiple Sclerosis” ELND002-MS103 sponsored by ELAN, conducted through Lifetree Research, March 2011 – ongoing.

Sponsor-Principal Investigator “Longitudinal pharmacokinetic, pharmacodynamic, immunological, and biochemical sample collection with MRI and relapse analysis of a Tysabri patient cohort” 001-002-TY sponsored by Rocky Mountain MS Clinic April 2011 – ongoing.

Principal Investigator “A Phase 2, Double-blind, Randomized, Placebo-controlled, Four-arm, Multicenter, Dose-finding Study to Assess the Safety and Efficacy of Three Dose Levels of AVP-923 (Dextromethorphan/Quinidine) in the Treatment of Central Neuropathic Pain in Patients with Multiple Sclerosis” 11-AVR-130 sponsored by Avanir Pharmaceuticals, Inc. August 2011 - ongoing.

Principal Investigator A Multicenter, Observational, Open-Label, Single-Arm Study of Tysabri in Early Relapsing-Remitting Multiple Sclerosis in Anti-JCV Antibody Negative Patient” 101MS407 sponsored by Biogen Idec, January 2012 – ongoing.

Consultancies:

Clinical consultant to the National Multiple Sclerosis Society: Utah Chapter. Active in presentation of newly diagnosed, MS therapeutics, and update in MS seminars.

Awards:

National Multiple Sclerosis Society Utah-Southern Idaho Chapter, “T.K. McCarthy Silver Hope Award” September 2011

National Multiple Sclerosis Society Utah Chapter Above and Beyond Award 2006

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